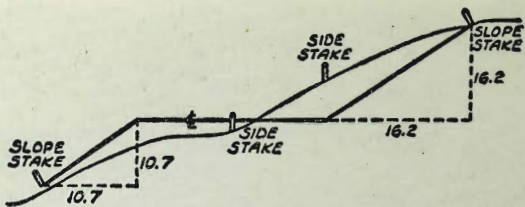




G-355



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING  
SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

MICROFILMED

APR 16 1965

DIRECTIONS FOR USE OF TABLES

TABLE No. XIV

Distance of short axis from axis of shoulder  
rate for any width roadway, slope 1% to 1

---

IMPROVED TABLES  
AND  
INFORMATION

---

TABLE No. VIII

To find Tangent and External for curve of  
any other degree divide by degree of curve and  
add correction from 1st column of corrections  
Degree of curve is the angle between two  
by dividing angle by the radius, or  
given tangent (see formula)  $T = R \tan \frac{1}{2} \Delta$

The distance from a point on the tangent to  
the center is very nearly the radius of the tangent  
length divided by twice the radius

## INDEX

	Page
Morrell St. Pacific Beach Dr. to Grand	3-9
" " Balboa & Grand Intersections	10
" " Balboa to Garnet	11-13
Storm Drain Jewell & Grand	14
" " Kendall & "	15
" " Lamont & Grand	16
" " Morrell & Grand	19
Lamont & Grand N. Wly. cb. Ret.	18
Balboa & Morrell Drain	19
Olney + Grand Drains	
Noyes Grand Drains	20
Hornblend - Grade & cbs.	21.
Morrell & Grand curb inlets	22
" & Balboa curb inlets	22
Grand, 36" drain <sup>Quincy</sup> west of	22
To Morrell <del>to west</del>	
Grand Ave Ely. end of Job.	24-32
Sly. line Grand Morrell to Lamont	32
Nly. " Balboa " " "	33
& Grand Olney to Ingraham	34-36
Hornblend & Morrell. cb. Returns	37-38
Grand. Jewell To Ingraham.	39-41
Obs. on Ctr. Island	

Balboa - cb. Sly. side	
Balboa. Wly. Ctr. Island. East of Lamont	42-
P.B. Drive & Morrell - Cb. Returns	50
Balboa. - Morrell to Noyes	51
Jewel + Grand. cb. + sly. returns	53
Noyes & Grand Curb returns	54
Olney & Grand " "	55
Pendelton & Grand " "	56
Morrell & Grand " "	58
Calle Campana & Grand " "	57
" " " " Culvert	59
Quincy & Grand open ditch	59
S. Ely. cb. Ret Morrell & Balboa	60
Frontier Pump Sta & <sup>Storm</sup> Drain	63



Morrell St. w.o.# 31941

Pacific Beach Drive to Grand  
3-oct. 1955

Rough Grade  
Curb Grade

INDEXED  
JUN 11 1957

3

Cross on walkway + 2'

1+35 Nly. line Alley

Prop. pipe on Lt. X 7'  
Cross on conc. slab

21.04  
19.79  
C 1.25

8.34  
19.04  
F 0.70

Prop ↓

1+15 Nly. line Alley

21.94  
20.48

0.58 B.C. 9.71  
20.62 19.78  
F 0.04 F 0.07

7.71  
19.66  
F 1.75

8.13  
20.06  
F 1.93

1+11 Alley ob. B.C.

Prop →

1.74  
20.88  
C 0.86

2.44  
21.34  
C 1.10

1.21  
21.34  
F 0.13

0.40  
20.44  
F 0.04

18.01  
20.44  
F 2.43

+90

+70

3.50  
21.73  
C -1.77

1.80  
21.73  
C 0.07

1.06  
21.02  
C 0.04

8.84  
21.02  
F 2.18

+50

2+40

24.70  
22.40  
C 2.30

2.43  
22.40  
C 0.03

1.65  
21.50  
C 0.15

19.55  
21.50  
F 1.95

0+30

2+20

5.14  
22.72  
C 2.42

2.87  
22.72  
C 0.15

1.96  
21.89  
C 0.07

20.00  
21.89  
F 1.89

0+15 ob. E.C.

2+00

5.27  
22.89  
C 2.38

3.02  
22.89  
C 0.13

22.15

20.07  
22.15  
F 2.08

0+00 Nly. line  
P.B Drive

1+80

curb returns  
page 50

Morrell

S. Ely. 7 disk Oliver + Morrell - 16.43

4

R.      d.      eb

0+20

20.09	7.22	6.83	20.18	d 2'
17.32	17.32	16.83	16.83	
C 2.77	F 0.10	Grade	C 3.35	

0+10 = Curbs E.C.

9.94	7.11	6.53	9.65
17.07	17.07	16.56	16.56
C 2.87	C 0.04	F 0.03	C 3.09

0+00 = Nly line Oliver

plans - 16.99	16.50
.95	.41

2+70 = Sly line Oliver

2+40 = B.C. Curbs

9.53	7.09	6.58	5.86
17.04	17.04	16.53	16.53
C 2.49	C 0.05	C 0.05	F 0.67

2+20

d - 2'

9.94	7.26	6.89	6.34
17.24	17.24	16.73	16.73
C 2.70	C 0.02	C 0.16	F 0.39

2+00

d  
line

9.92	7.56	7.15	6.98
17.64	17.64	17.10	17.10
C 2.28	F 0.08	C 0.05	F 0.12

1+80

20.05	8.27	7.58	7.48
18.24	18.24	17.64	17.64
C 1.21	C 0.03	F 0.06	F 0.16
C 1.81			

1+37 = Alley d. E.C.

064	9.70	9.01	prop.	849
20.19 ← prop	19.65	18.92	→	19.44
C 0.45	C 0.05	C 0.09		F 0.95

			cl.	cl.			
1+90			26.5 25.54 C 1.0	5.54 25.54 Grade	5.13 25.04 C 0.09	8.15 25.04 C 3.11	N-line
1+70 P.U.C.		a-5'	5.90 24.83 C 1.07	4.90 24.83 C 0.07	4.48 24.33 C 0.15	7.64 24.33 C 3.31	N-line
1+50							
1+49 = cl. E.C.				3.91 23.86 C 0.05	3.32 23.36 F 0.04		26.22 23.55 C 2.67
1+45 = Nly. line Alley		4.86 24.05 C 0.81 Prop	4.56 23.65 C 0.91	3.91 23.73 C 0.18	3.32 23.23 C 0.09	6.04 23.15 C 2.89	Prop
1+25 = Sly line Alley		3.78 23.01 C 0.77	4.00 22.61 C 1.39	2.61 22.69 F 0.08	1.78 22.19 F 0.41	4.58 22.11 C 2.47	4.55 22.51 2.04
1+21 = cl. B.C.				2.61 22.40 C 0.21	1.78 21.90 F 0.12		
0+82.5	1+50	a-1'	1.19 20.40 C 0.79	0.40 20.40 Grade	9.93 19.90 C 0.03	23.68 19.90 C 3.78	a-1'
0+40		a-1'	10.09 18.18 C 1.90	8.01 18.18 F 0.17	7.86 17.68 C 0.19	20.31 17.68 C 2.63	



Marshall

disk Reed &amp; Marrell ELI = 26.78

6

0+60

N-line

3.52  
30.97  
C 2.551.31  
30.32  
C 0.99

0+10 = C.E.C.

D-line

31.41  
28.71  
C 2.7030.84  
28.20  
C 2.64

0+00 = Nly line Reed

1.47

2+70 = Sly Line Reed

2+60 C.B.C.

8.3  
26.29  
C 2.06.36  
26.29  
C 0.075.87  
25.90  
C 0.039.25  
25.90  
C 3.35

N-line

2+50 E.V.C.

2+30 E.V.C.

8.11  
26.23  
C 1.886.28  
26.23  
C 0.055.83  
25.73  
C 0.108.87  
25.73  
C 3.14

N-line

2+10

6.71  
25.99  
C 0.725.99  
25.99  
Grade5.52  
25.29  
C 0.238.31  
25.49  
C 2.82

K-3'

Morrall

7

2410

D-line

5.32  
34.27  
C 1.053.68  
33.46  
C 0.22

1490

X 1'

5.25  
34.56  
C 0.693.67  
33.78  
F 0.11

D-line

1470

N. line

5.71  
34.72  
C 0.993.34  
33.83  
F 0.49

1450

34.52

33.60

34.52

1449 = cl. P.C.

1445 = Nly line Alloy

N. line

5.67  
34.40  
C 1.273.17  
33.54  
F 0.37

1425 = sly line Alloy

4.70  
33.84  
C 0.862.85  
33.07  
F 0.22

1421 cl. B.C.

1410

4.38  
33.26  
C 1.122.60  
32.45  
C 0.15

Morrell

S.Wly. disk Thomas & Morrell EL. = 31.85

8

1+25	sly line Alley		7.50 36.01 C 11.49		4.58 34.98 <del>60.60</del> F 0.40	
1+21	= cl. B.C.		3—			
0+86.6	(+ rail)	N. 5'	7.60 34.98 C 2.62		3.57 34.08 F 0.51	0.1'
0+48.3	3 x 38.3 (+ rail)		6.87 33.94 C 2.93		2.90 33.18 F 0.28	0-line
0+10	)		6.31 32.90 C 3.41		1.82 32.28 F 0.46	
0+00	= Nly line Thomas.					
2+70	= sly line Thomas					
2+60	= cl. B.C.		6.11 32.42 C 3.69		2.94 31.82 C 1.12	
2+30			5.95 33.61 C 2.34		3.60 32.88 C 0.72	0.3'

Morrell

B.M. on S.W. by R.P. cross (83.39) to Mon.  
Grand + Morrell EL = 4069

9

0+24.89 = cl. B.C. on RT

0+00 = Nly line Grand

2+70 = Sly line Grand

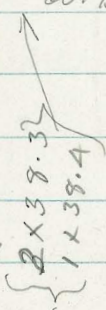
2+60 cl. B.C.

2+21.6

1+83.3

1+49 = cl. E.C.

1+45 = Nly line Alley



	—	42.99	
	41.80	41.74	
	40.62	42.41	
	39.50	38.90	x-line
	C 1.12	C 3.51	
a line	9.87	9.14	x-line
	38.51	37.75	
	C 1.36	C 1.39	
	9.45	8.91	
	37.52	36.60	x-line
	C 1.93	C 2.31	
	—		
N-1'	8.16	4.92	
	36.53	35.45	
	C-1.63	F 0.53	

Marrell

10

10 + 27.20 = ab. B.C. on Lt.

43.20

Morrell - Balboa to Diamond  
 WO 31554.

11

1+25 = sly line Hornblend

1+15<sup>00</sup> = cl. B.C.

↑

0+69.78

x 2

2

-

45.22

0+24.56 = Nly end curb inlets

0+09<sup>00</sup> = sly. end curb inlets (10 only)

0+02 = Alley cl. E.C.

0+00 = Nly line Alley to west

Set from Balboa<sup>st.</sup> & Hornblend streets  
 on Morrell st.

Rough

cl.

cl.

Rough

page 37

2.51

52.01

60.50

F0.06

51.49

50.55

49.56

C 0.97

C0.13

49.17

7.15

47.10

0.95 High

Meet.

✓

46.86

46.29

46.09

8.69

45.93

C 2.76

45.82

	Rough Gr.	cl.	cl.	Rough Gr.
1+87.3	3.42 62.30 C 1.12	C 0.37	F 0.06	2.30 61.76 C 0.54
1+47 1+49 = cl. E. C.	-	F 0.25	F 0.48	-
1+45 = Nly line Alloy	2.00 60.42 C 1.58			0.35 60.33 C 0.02
1+25 = Sly line Alloy	60.40 59.53 C 0.87			59.66
1+23 = cl. B.C. 1+21 = cl. B.C.	-	C 1.125 Nail - 145 85		-
0+86.6	60.00 57.82 C 2.24			58.36
0+48.3	8.37 56.12 C 2.25	C 0.10		57.07
0+10 = cl. E.C.	7.33 54.42 C 2.91			55.78
0+00 = Nly line Hornblend				

A. 44170

S. 3737

2+70 = sly nice Garnet.

2+6A.0 = cl. B.C. on Lt.

2+60 = cl. B.C. on Rt. - check for change

2+2516

Rough	cl	cl	Rough
			64.55 <sup>✓</sup>
5.98	Meet		
65.70	existing cl		
C 0.28		4.43	64.30
		64.30	
5.25		C 0.13	3.37
6A.00	C 0.23	C 0.15	63.05
C .125			C 0.32



INDEXED

11/11 1957

Storm Drain Jewell

at Grand 400 ft. in  
Ref. sheet 2313-D & 2314-D

Stakes 5' H. of ~~E~~

N.W. B.P. Kendall & Grand. EL. = 51.55 1A

2+1A.7 = B.C.      50.12  
                            44.62  
                            C 5.50

1+75<sup>c</sup>      50.22  
                    44.44  
                    C 5.78

1+34<sup>4</sup>      9.15  
                    44.24  
                    C 4.91

0+93<sup>2</sup>      7.55  
                    44.05  
                    C 3.50

0+52 = B.K      6.07  
                    43.85  
                    C 2.22

0+32.6 = E.C.      6.45  
                    42.94  
                    C 3.51

22' Rad. set.

0+1.7<sup>2</sup> = B.C.      6.35  
                    42.21  
                    C 4.14

0+00 = Existing  
C.I. on Jewell

~~41.40~~

5.35  
41.45 - Actual  
C 3.90      I.E.

2+94 =      ~~E.C.I.~~      51.25  
                    Box      45.00  
                                    C 6.25

2+66.3      51.20  
                    44.88  
                    C 6.32

2+38.5 = E.C.      50.35  
                                    44.74  
                                    C 5.61

2+26<sup>6</sup> Mid. Curve      44.68

R = 91' Ext. = 4.81

Storm Drain

Kendall & Grand

stakes 5' Right.

0+00 = existing stub

S.W. ly. Cor.

feet

Ely side C.I. Box

	50.19
0+72 ±	45.00
	C 5.19

	50.41
0+48	44.64
	C 5.77

	50.38
0+24	44.28
	C 6.10

	50.59
0+00	43.92
	C 6.67

Storm Drain

Kendall & Grand.  
N.W. ly. Cor.

0+00 = Ely side of box to new

C.I. on Grand. sheet 2313-D  
2314-D

0+30 = existing stub	51.70
	45.22
	C 6.48

0+00	51.74
	45.60
	C 6.14

Storm Drain

9-10-55

16

Lamont & Grand  
Sheet 231A-D

Stakes 5' Rt. of  $\pm$

0+00 = Nly. end existing stub.

0+76<sup>±</sup> =  $\pm$  "Type B" C.I.

0+75<sup>±</sup> = end pipe

9.77  
44.00  
C 5.79

0+50<sup>±</sup>

9.35  
43.12  
C 6.23

0+25<sup>±</sup>

7.04  
42.24  
C 8.80

0+00

8.66  
41.36  
C 7.30

Lamont + Grand  
N.W. Ly. Cl. Ret.

No. D - Good

Burr Δ  
see page 18

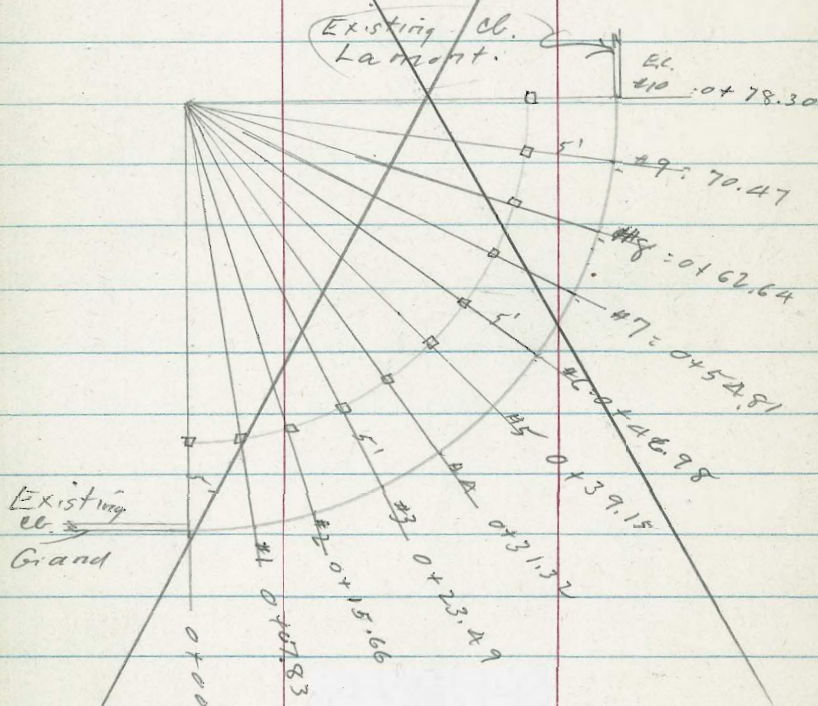
L = 78.3'

Δ 89° 48' Turned from curb. P.I.

cb. Rad = 50 stake line Rad = 45

ch. = 7.83  
10 parts

ch. = 7.05  
10 parts

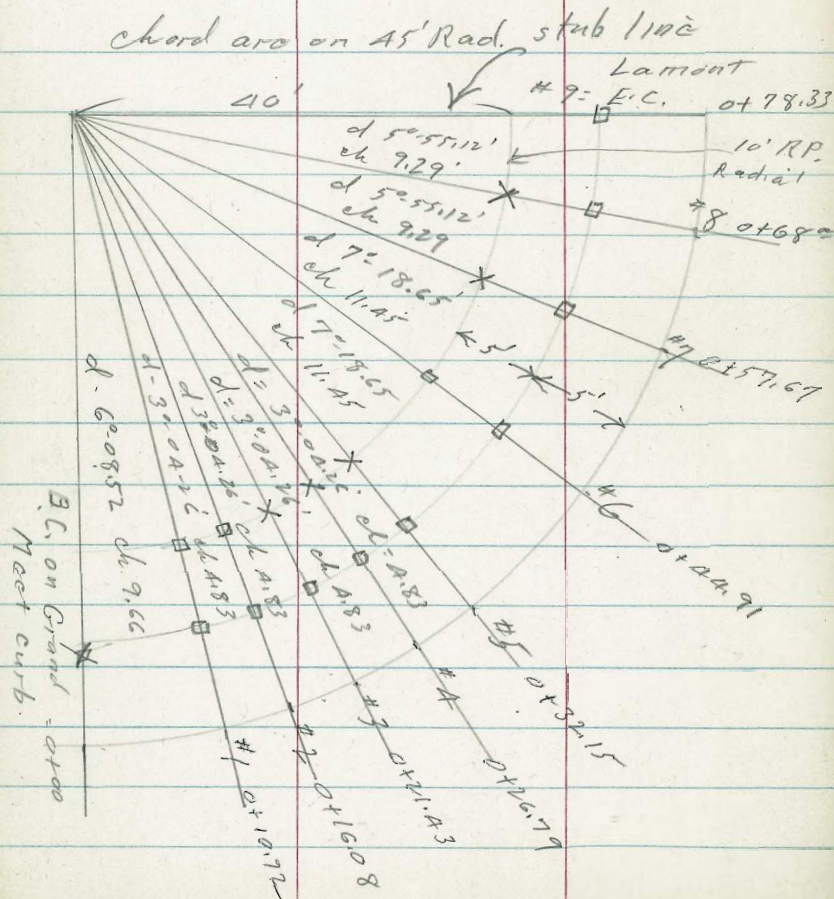


Stn.	Angle	Grade
#10	44° 54'	51.25
#9	40° 24.6'	51.00
#8	35° 55.2'	50.85
#7	31° 25.8'	50.70
#6	26° 56.4'	50.61
#5	22° 27'	50.56
#4	17° 57.6'	50.50
#3	13° 28.2'	50.48
#2	8° 58.8'	50.49
#1	4° 29.4'	50.51

B.C. Grand

Lamont + Grand  
N. Wly. Cb. Ret.

$\Delta 89^\circ 46'$  turned



18

11.5'

Point	Offset	Station	Meeting Point
#9 E.C. Lamont		78.33	Meet Cb. 1.16 118 51.25 Fo.09 Met
#8	0.89	50.96	0.90 50.90 X
#7	0.72	50.75	0.72 50.72 X
#6	0.42	50.58	0.42 50.57 Fo.15
#5	0.60	50.50	0.60 50.50 Co.10
#4	0.51	50.49	0.52 50.49 Co.03
#3	0.52	50.48	0.53 50.48 Co.05
#2	0.53	50.48	0.54 50.48 Co.06
#1	0.52	50.49	0.53 50.49 Co.04
B.C. on Grand -		50.51	Meet Curb

INDEXED

Balboa &amp; Morrell 10/17

111<sup>th</sup> W. Wily Cor. Drain + C.B.

N.W. 7' Lt. + Horribland + Morrell EL = 54.15

For curb inlets see Page 22

Ely. end. C.B.

6.05  
45.20  
C 0.85

6' Back of d.

Wly end. C.B.

6.16  
45.20  
C 0.96stakes 6<sup>5</sup>/<sub>8</sub> Lt. of  $\phi$ 

Catch Basin

0+7A = Ely Side Type H.

45.42  
39.50  
C 5.92

0+55.5

45.91  
38.78  
C 7.13

0+37

45.28  
38.05  
C 7.230+18<sup>5</sup>/<sub>8</sub>45.41  
37.33  
C 8.08

0+00 = Existing Drain

sheet 231A-A.D.

45.25  
36.60  
C 8.65

Drains - Morrell + Grand 19

Drain N. wly. Ret. - Grand &amp; Morrell

stakes - 5' south of  $\phi$ End of Pipe  
0+48

0+24

0+00 Existing  
pipe

43.33

41.90

41.84

36.50

35.65

34.80

C-6.83

C-6.25

C 7.04

Drain S. wly. cor. Grand &amp; Morrell

0+00 = Existing drain

stakes 5' Lt (East) of  $\phi$ 

End Pipe

0+07

0+00 Existing  
Line

40.43

40.56

34.66

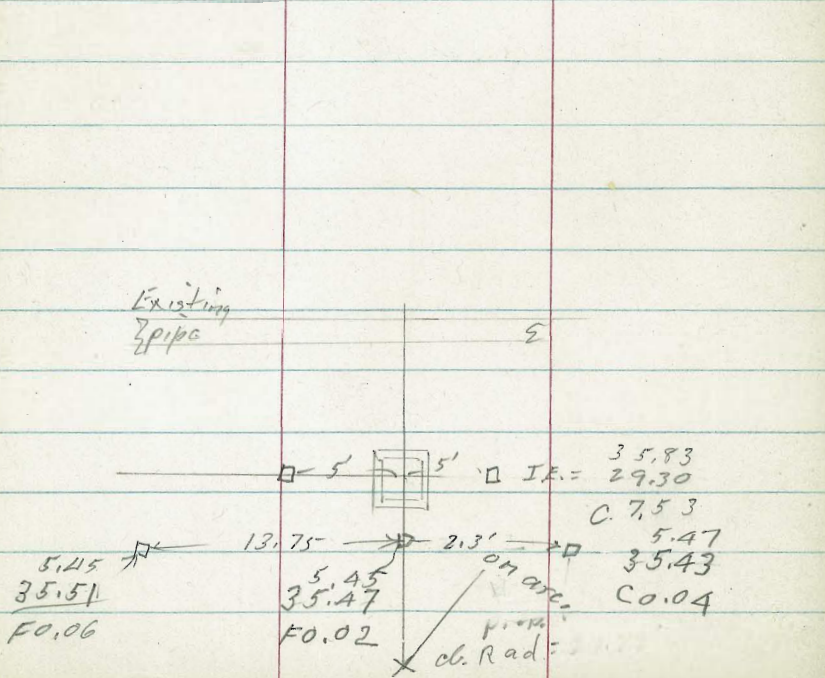
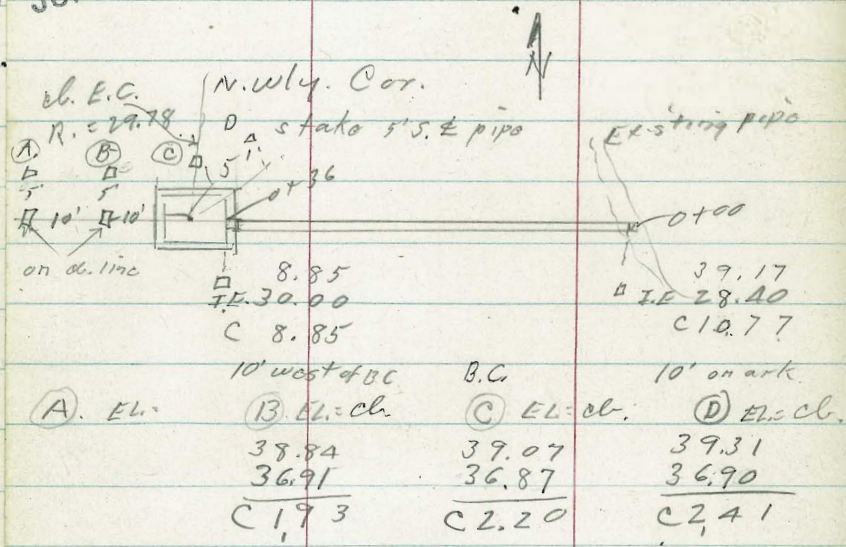
34.30

C 5.77

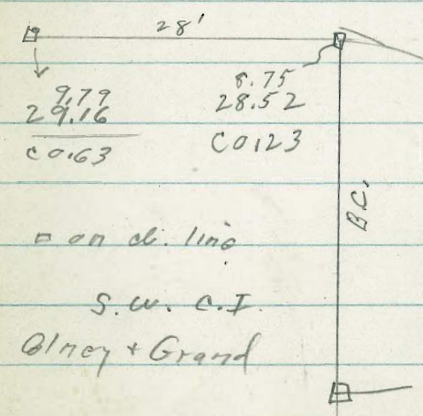
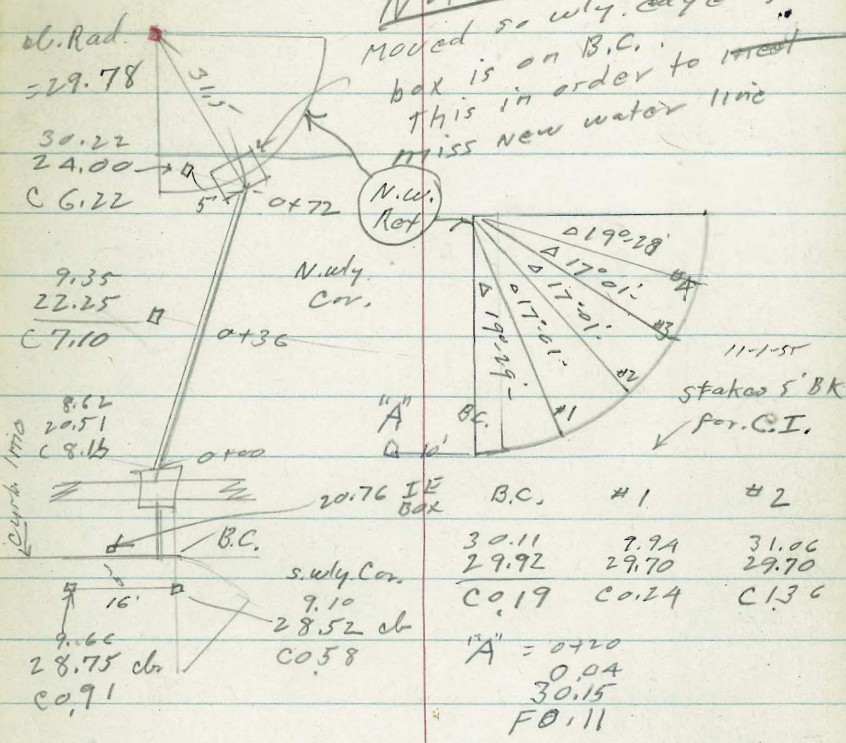
C 6.26

INDEXED

Voyes & Grand  
Storm Drains  
JUN 11 1951



Olney & Grand  
Drains 20



S.W. C.I.  
Olney + Grand

INDEXED

Hornblend St.

Morrell to Noyes

10/25/55

JUN 11 1957

	Rough	Nly. α.	Slg. cl.	Rough.
2+40 E.V.C.	8.10 A8.07 C0.03	8.31 A8.07 C0.14	7.14 47.07 C0.07	6.11 x A7.07 F0.96
2+20	8.23 A8.20 C0.03	8.27 A8.20 C0.07	7.23 47.18 C0.05	6.65 A7.18 F0.53
2+00	7.99 A8.47 F0.48	8.59 A8.47 C0.12	7.48 47.39 C0.09	6.92 A7.39 F0.47
1+80	8.43 A8.87 F0.44	8.89 A8.87 C0.02	7.78 47.70 C0.08	6.70 A7.70 F1.00
1+60 M.V.C.	9.27 A9.42 F0.15	9.60 A9.42 C0.18	8.10 48.11 F0.01	6.61 A8.11 F1.50
1+10 *	4.09 51.06 C3.03	C0.14	C0.05	8.41 A9.33 F0.92
0+60 3'	5.90 52.70 C3.20	C0.20	C0.25	0.73 50.55 C0.18
0+10 = cl. E.C. 3'	6.08 54.33 C-1.75	4.35 54.33 C0.02	1.93 51.77 C0.16	1.71 51.77 F0.06
0+00	Morrell			

21

End. of. cl.	Rough	Nly. cl.	Slg. cl.	Rough
5+00S on Rt. N. 0.5 in	54.33	7.49	6.59	
5+03 on Lt. 0.5 in	A7.37	A7.37	46.29	46.29
Early line Noyes	C6.96	C0.12	C0.30	
5+00 on Rt.	—	6. B.C. →	6.52 46.29	45.58 46.29
			C0.23	F0.91
N. 0.5 in on North	53.95	7.40	—	—
4+90* cl. B.C.	A7.32	A7.32	—	—
	C6.63	C0.08	—	—
4+70 Rt. only	—	—	C0.16	—
A+40	52.47 47.47 C5.00	C0.10	C0.30	6.30 46.47 F0.17
3+90	8.60 A7.62 C0.98	C0.04	C0.09	5.93 46.62 F0.69
3+40	8.07 A7.77 C0.30	F0.07	C0.22	6.09 46.77 F0.68
2+90	7.86 A7.92 F0.06	C0.08	C0.02	5.93 46.92 F0.99

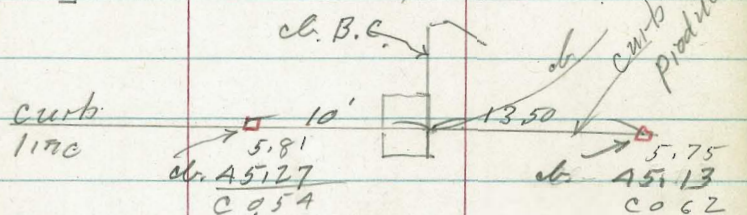


JUN 11 1957

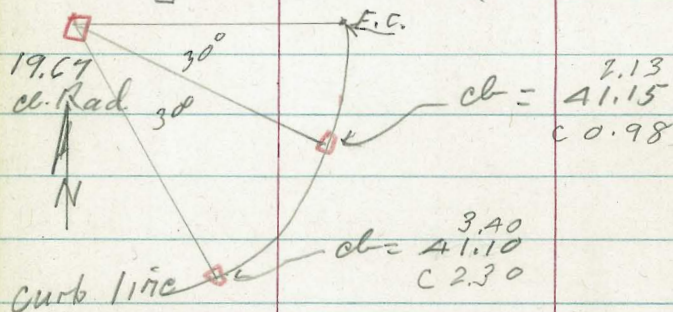
Curb inlets  
Morrell + Grand  
" @ Balboa

7/25/55

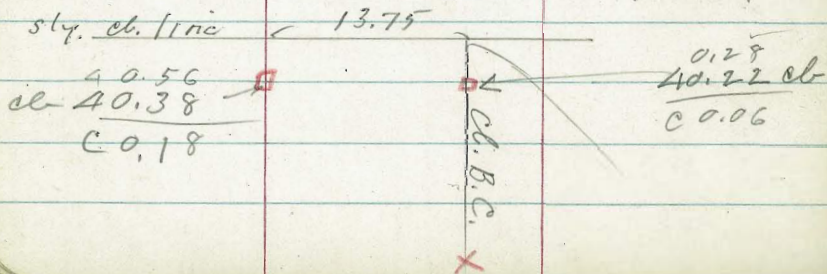
N.Wly. Ret Balboa @ Morrell



N.Wly Ret Grand + Morrell



S.Wly Grand + Morrell - stakes  
5' Back.



22

36" drain west of Quincy  
at 100 = sly. line Grand

Restake

~~11.17 11.00  
4.40 4.40  
C 0.77 c 6.60~~

1+25 = Nly. Grand

stakes 10' Lt.

~~12.40 9.83  
4.00 4.00 0+625  
C 7.00 c 5.83~~

~~7.81 7.64  
3.60 3.60 0+00  
C 4.21 c 4.04~~

Top.  
⊙ pipe - 47" Lt. & Lt EL. 5.00

Line  
1+10 = Existing water

EL. Top of ⊙ = 5.03

EL. Bottom of 30" = 3.80



# INDEXED Grand Ave

10-31-55  
w.o.# 32382

2A

JUN 1 1957  
West East of Calle Campana to  
Lamont

0+00 = 517<sup>62</sup> East of wly. line Quincy St.

South  
Rough Curb

North

ab. Rough

1+30

3.50 5.48  
5.83 5.83  
F2.33 F0.35

5.71

6.56 5.08  
~~6.49~~ 6.55  
6.55 6.55  
~~6.14~~ F1.47  
6.01

0+89.62 E.V.C.

3.64 5.48  
5.68 5.68  
F2.04 F0.10

5.72

6.29 6.41 4.81  
6.33 ~~6.33~~ 6.33  
F0.04 ~~C 0.08~~ F15.2

0+49.62

3.38 5.45  
5.53 5.53  
F2.15 F0.08

6.02 6.14 4.77  
6.11 6.11 6.11  
F0.09 ~~C 0.04~~ F13.4

0+29.62 Both Lt+Rt.

3.52 5.30  
~~5.47~~ 5.47  
F1.95 ~~F0.10~~

5.30  
5.40  
F0.10

5.75 5.88 4.65  
6.00 6.00 6.00  
F0.25 ~~F 0.12~~ F13.5

0+15.52 = E.C. Lt. only.

5.44 ~~5.17~~  
5.44 5.35  
F0.18

5.17  
5.35  
F0.18

0+09<sup>36</sup> Lt. only on Curve

5.43 ~~4.97~~  
5.43 5.30  
F0.33

4.97  
5.30  
F0.33

0+04<sup>62</sup> Rt. only

5.34 5.45  
5.89 5.89 5.89  
F0.55 ~~F 0.44~~

0+00 = start job.

5.42 5.12  
5.36 5.36  
0.24  
low

5.12  
5.12  
Meet  
at

5.72 5.72  
5.84 5.84  
low

East of Quincy

South  
Rough W

st. North  
Rough

= 0+00 ahead.  
5+176<sup>2</sup> = wly line Quincy

			7.49		8.87		
		5.87	7.61		8.97	8.10	
4+77.62		7.61	7.61		8.84	8.84	
		F1.74	F0.12		C0.03	F0.71	
			7.15		8.38		
		5.25	7.29		8.48	7.30	
4+37.62		7.29	7.29		8.48	8.48	
		F2.04	F0.11		F0.10	F1.18	
			6.93		8.24		
		4.57	7.05		8.34	6.77	
3+97.62 P.O.C.		7.05	7.05		8.18	8.18	
		F2.48	F0.12		C0.06	F1.41	
			6.69		7.72		
		4.23	6.80	NG line	7.82	6.40	
3+48.81		6.80	6.80		7.86	7.86	
		F2.57	F0.12		F0.04	F1.40	
			6.52		7.11	5.95	
		4.28	6.68		7.55	7.55	
= ch. E.C. 3+00 = wly ch. P.C. Campana		6.54	6.54		F0.44	F1.60	
		F2.26	C0.02				
			6.28		7.30		
		3.81	6.28		7.43	5.64	
* = Ely. line 2+50 = ch. B.C. - Calle Campana		6.28	6.28		7.22	7.22	
2+50.91 on 50 = B.C. w/ Rad. ch.		F2.47	grade.		C0.08	F1.58	
			6.05		7.17	5.38	
		3.39	6.13		7.00	7.00	
2+10		6.13	6.13		C0.30	F1.62	
		F2.74	F0.08		C0.17		
			5.84		7.01	5.21	
		3.38	5.98	5.70	6.78	6.78	
1+70		5.98	5.98		6.78	6.78	
		F2.60	F0.14		C0.12	C0.23	F1.57

P. 242

P. 242

Grand Quincy + Pendelton

	South = Lt.		North = Rt.	
	Rough	u	curb	Rough
2+98.38 = Ely line Pendelton				
2+88.38 = Ely <sup>dr. B.C.</sup> Pendelton	331 12.91 C 0.10	4.45 12.91 C 1.54	4.34 14.31 C 0.03	6.56 14.31 C 2.25
2+78.38 =		-12.68		—
2+38.38	2.20 11.80 C 0.40	1.90 11.80 C 0.10	3.23 13.20 C 0.03	5.27 13.20 C 2.07
1+98.38	1.44 10.99 C 0.45	1.03 10.99 C 0.04	2.31 12.38 F 0.07	4.00 12.38 C 1.62
1+58.38	0.40 10.24 C 0.16	0.28 10.24 C 0.04	1.64 11.62 C 0.02	2.98 11.62 C 1.36
1+18.38	7.14 9.57 F 0.43	9.41 9.57 F 0.16	1.02 10.93 C 0.09	1.75 10.93 C 0.82
0+78.38	8.10 8.97 F 0.87	8.80 8.97 F 0.11	0.41 10.31 C 0.10	1.09 10.31 C 0.78
0+38.38	7.01 8.44 F 1.43	8.46 8.44 C 0.02	7.73 9.75 F 0.02	9.25 9.75 F 0.50
0+00	6.43 7.99 F 1.56	8.15 7.99 C 0.16	9.29 9.36 F 0.07	7.12 9.36 F 0.24
0+00 = wly Quincy				

Grand

Pendelton west

South  
Rough - curb

North  
curb Rough

3+20 = ~~84~~

3.48  
22.32  
C1.16

6.34  
23.71  
C-2.63

3+00

2.79  
21.87 C0.25  
C0.92

5.83  
23.27  
C2.56

2+50

1.26  
20.72 C0.22  
C0.59

4.66  
22.12  
C-2.54

2+00

20.26  
19.57 C0.22  
C0.59

3.29  
20.97  
C2.32

7+50

2.39

7.31  
18.42 C0.15  
C0.89

2.32  
19.82  
C2.50

1+00

8.74  
17.27 C0.44  
C-1.47

21.25  
18.67  
C2.58

0+50

7.61  
16.12 C0.05  
C1.49

9.89  
17.52  
C1.35

0+10 = cb. E.C.

6.62 5.22  
15.20 15.20  
C1.42 C0.02

6.79 8.61  
16.60 16.60  
C0.19 C2.01

= 0+00 = Wly. Pendelton  
377838

curb returns page 56

Grand

S.W. 30' Rad. X EL. = 29.55

28

Olney-west.

Lt.  
RoughLt.  
cl.

RA. cl.

RA. Rough.

0+80

-0.1'

2.75  
30.09  
2.640.33  
30.09  
0.241.63  
31.49  
0.146.60  
31.49  
0.5.11

0+40

9.89  
29.21  
0.689.25  
29.21  
0.040.83  
30.61  
0.225.98  
30.61  
0.5.37

0+10 = cl. E.C.

9.47  
28.52  
0.958.78  
28.52  
0.263.071  
29.92  
0.793.534  
29.92  
0.5.42

0+00 = Wly line Olney

Curb returns - page 55

5+00 = Ely line Olney

4+90 = cl. B.C.

5.68  
26.22  
0.546.25  
26.22  
0.037.39  
27.61  
0.2230.70  
27.61  
0.3.09

A+50

5.54  
25.31  
0.23

0.12

0.02

9.73  
26.70  
0.3.03

4+00

5.02  
24.16  
0.86

0.20

0.05

8.53  
25.55  
0.2.98

3+50

4.12  
23.01  
0.11

grade

0.05

7.23  
24.40  
0.2.83

west from Olney  
Grand

29

South  
Rough  
C.

So.  
curb

North d

North  
Rough.

4+40

9.99  
34.72  
C5.27

4.81  
34.72  
C0.09

6.12  
36.12  
X  
C5.48

4+00

7.57  
34.50  
C-5.07

4.55  
34.50  
C0.05

5.85  
35.90  
F0.05  
C-5.39

3+60

4.05  
34.20  
C5.85

4.28  
34.20  
C-0.08

5.45  
35.60  
F0.15  
C-4.23

3+20

33.75  
33.83  
F0.08

3.99  
33.83  
C0.16

5.30  
35.23  
C0.07  
C4.09

2+80

40.07  
33.40  
C-6.67

3.34  
33.40  
F0.06

4.90  
34.80  
C0.10  
C-3.61

2+40

8.28  
32.88  
C-5.40

2.85  
32.88  
F0.03

4.55  
34.28  
C0.27  
C-4.92

2+00

7.68  
32.29  
C5.39

2.31  
32.29  
C0.02

3.78  
33.69  
C0.09  
C-4.81

1+60

6.55  
31.63  
C4.92

1.73  
31.63  
C0.10

3.09  
33.03  
C0.06  
C-2.78

1+20

4.53  
30.90  
C-3.63

1.07  
30.90  
C0.17

2.43  
32.30  
C0.13  
C0.01

1+00 = 62' Lt. = prop pipe on North of  
N.W. Cor. post of conc. wall.



	Grand	South	So.	North	North	30
	Noyes - west	Rough	Curb	ch.	Rough	
1+70		5.87 36.25 F0.38	6.28 36.25 C-0.03		7.68 37.65 C0.03	8.67 37.65 C1.02
1+50		4.98 36.12 F1.14	6.14 36.12 C0.02		7.50 37.52 F0.02	9.00 37.52 C1.48
1+10		4.37 35.89 F1.52	6.01 35.89 C0.12		7.45 37.29 C0.16	8.48 37.29 C1.19
0+70		3.66 35.68 F2.02	5.70 35.68 C0.02		6.90 37.08 F0.18	9.25 37.08 C2.17
3 0+50		3.65 35.59 F1.94	5.63 35.59 C0.04		6.46 36.99 F0.53	9.22 36.99 02.23
2 0+10 = cl.E.C.		3.98 35.47 F1.49	5.26 35.47 F0.21		6.92 36.87 C0.05	9.32 36.87 C2.45
2 0+00 = wly line Noyes		35.36				36.76
	Curb returns - Page 54					
2						
1	A+99.5 = Ely line Noyes	34.99				36.39
1	A+89.5 = cl.B.C.	5.93 34.88 C1.05	5.04 34.88 C0.16		6.34 36.28 C0.06	9.69 36.28 C-3.41
1						

Grand  
Noyes to Morrell

So.  
Rough

So.  
d.

5+00 = Ely. line Morrell

39.24

4+90 = B.C.

0.36 9.34  
39.14 39.14  
C 1.22 C 0.20

4+50

0.32 8.92  
38.69 38.69  
C 1.63 C 0.23

4+10

9.92 8.36  
38.26 38.26  
C 1.66 C 0.10

3+70

8.55 8.01  
37.86 37.86  
C 0.69 C 0.15

3+30

7.50 7.70  
37.49 37.49  
C 0.01 C 0.21

2+90

7.51 7.25  
37.14 37.14  
C 0.37 C 0.11

2+50

7.65 6.93  
36.82 36.82  
C 0.83 C 0.11

2+10

6.00 6.55  
36.52 36.52  
F 0.52 C 0.03

North  
eb. rough

31

40.64

0.71 3.75  
40.53 40.53  
C 0.18 C 3.22

0.15 3.03  
40.09 40.09  
C 0.06 C 2.94

9.71 43.13  
39.66 39.66  
C 0.05 C 3.47

9.40 2.67  
39.26 39.26  
C 0.14 C 3.41

9.00 42.53  
38.89 38.89  
C 0.11 C 3.64

8.56 40.83  
38.54 38.54  
C 0.02 C 2.29

8.13 9.09  
38.22 38.22  
F 0.09 C 0.87

7.92 8.45  
37.92 37.92  
X C 0.53

C 1.6 to  
west.

Sly. line Grand Ave } Morrill  
 to  
~~Nly. line Balboa Ave~~ } Lamont 11-2-55

S. w. c. Rad. Morrill & Grand 32

EL = 40.43

→ 47.89 ←  
 47.53  
 F 0.36

47.67

#4

Rough Gr. Curb

#3 S.E.

47.91  
 47.75  
 F 0.16

Lamont

47.94

#2 GRAND

47.82

C 0.12

Ret

#1

47.62  
 47.49  
 F 0.13

3+00 E.V.C. 4.75  
 44.06  
 C 0.69  
 44.22  
 44.06  
 C 0.16

2+60 3.50  
 43.37  
 C 0.11  
 43.63  
 43.39  
 C 0.24

2+20 1.95  
 42.76  
 F 0.81  
 42.93  
 42.76  
 C 0.17

1+80 1.60  
 42.19  
 F 0.53  
 42.33  
 42.19  
 C 0.14

1+40 1.80  
 41.67  
 C 0.13  
 41.84  
 41.67  
 C 0.17

1+00 P.V.C. 2.40  
 41.21  
 C -1.19  
 41.33  
 41.21  
 C 0.12

0+55 1.91  
 40.72  
 C -1.19  
 40.96  
 40.72  
 C 0.24

0+10 = cl. E.C. 0.51  
 40.22  
 C 0.29  
 40.40  
 40.22  
 C 0.14

0+00 = Wly. Morrill

5+00 Ely. line Lamont

Rough Gr.

Curb.

4+90 cl. B.C.

8.25  
 47.41  
 C 0.84

47.57  
 47.41  
 C 0.16

4+42.5

7.03  
 46.58  
 C 0.45

47.13  
 46.58  
 C 0.55

3+95

17.5 street

7.28  
 45.74  
 C 1.54

45.97  
 45.74  
 C 0.23

3+47.5

5.56  
 44.90  
 C 0.66

45.10  
 44.90  
 C 0.20

Nly line Balboa  
Morrell. to Lamont.

11-255

Curb Gr.      Rough Gr.

4+20  
~~3+99~~

7.41  
48.30  
C 1.11

3+74  
~~3+51~~

8.63  
47.95  
C 0.68

3+28  
~~3+05~~

8.30  
47.60  
C 0.76

2+82  
~~2+59~~

8.00  
47.25  
C 0.75

2+36  
~~2+13~~

8.00  
46.90  
C 1.10

1+90  
~~1+67~~

8.13  
46.55  
C 1.58

1+44 Brk  
1+21.11 Brk

7.34  
46.20  
C 1.14

0+95  
~~0+72~~

7.39  
45.74  
C 1.65

0+46 Brk  
~~0+23 Brk.~~

7.44  
45.27  
C 2.17

0+00 Nly line  
Morrell

45.00

SEE PAGE 61

This stationing is  
wrong on profile (2314-0)  
correct for curb stationing

Fly line Lamont.

4+89" cl. B.C. 5+12

4+45" 4+66

curb      Rough Gr.  
Rough Gr.      Rough Gr.

9.75  
49.00  
C 0.75

50.04  
48.65  
C 1.39

± grade Grand.

Olney to Noyes

11-5-15

± Grade - Grand

34

Noyes to Morrell

4+00  
3.97  
35.48  
F 1.51

3+60  
3.82  
35.18  
F 1.36

3+00  
3.17  
34.60  
F 1.43

2+40  
2.56  
33.86  
F 1.30

1+80  
1.85  
32.95  
F 1.10

1+20  
0.75  
31.88  
F 1.13

0+60  
9.71  
30.64  
F 0.93

0+10  
9.48  
29.50  
F 0.02

0+00 = wly. line Olney

2+30

1+70

1+10

0+50

0+10 d. E.C.

0+00 = wly. line Noyes

5+00 = Ely. Noyes

4+90 B.C.

4+40

8.30  
~~37.78~~ 37.65  
C 0.65

7.41  
37.23  
C 0.18

6.96  
36.87  
C 0.09

6.55  
36.57  
F 0.02

6.36  
36.39  
F 0.03

6.18  
~~35.92~~  
C 0.26

4.66  
35.70  
F 1.04

Grand Ave  $\pm$  Grades  
Noyes to Merrill 11/7

5+00 = Ely. Merrill

A+90 O.B.C. 0.17  
40.11  
C 0.06

A+50 9.62  
39.67  
F 0.05

A+10 9.44  
39.24  
C 0.20

3+50 8.77  
38.65  
C 0.12

2+90 8.60  
38.12  
C 0.48

Grand Ave  $\pm$  grades 35  
11/8

Kendall to Jewell

A+90 O.B.C. 1.00  
51.44  
F 0.44

A+80 1.14  
51.42  
F 0.28

A+40 1.00  
51.45  
F 0.45

3+80 0.92  
51.58  
F 0.66

3+40 0.70  
51.66  
F 0.96

2+80 0.85  
51.69  
F 0.84

2+20 P.O.C. 1.01  
51.62  
F 0.61

1+60 1.05  
51.52  
F 0.47

1+40 1.25  
51.40  
F 0.15

0+62 Rake 1.17  
51.29  
F 0.12

0+10 B-k. 0.88  
51.18  
F 0.30

0+00 = wly line Kendall

Grand Ave 11-8  
± grades - Jewell to Ingraham

36

5400 = Ely. Ingraham.

Brk	4.60
4+90 - ch. B.C.	53.20
A	F0.60

4+30	F0.95
------	-------

3+70 Reke	F0.62
-----------	-------

3+10 Reke	F0.80
-----------	-------

2+50 Brk	2.39
	53.24
	F0.85

1+90	F-0.77
------	--------

1+30 Reke	F-0.80
-----------	--------

0+70	F1.00
	0.87

0+10 ch. E.C.	51.82
	F0.95

0+00 = wly line Jewell

Morrell & Hornblend.

Curb returns

11/15/55

S. Wly. Ret.

#5 E.C. Hornblend 52.98 Existing cl.

#A 3.24  
52.92  
C-032

#3 3.14  
52.82  
C0.32

#2 3.01  
52.70  
C0.31

#1 2.55  
52.45  
C0.10

B.C. Morrell 1.95  
52.01  
F0.06

S. Ely. Ret.

#5 E.C. Hornblend 1.93  
51.77  
C0.16

#A 2.02  
52.00  
C0.22

#3 2.47  
52.12  
C0.35

#2 2.21  
52.10  
C0.11

#1 1.90  
51.90  
X

B.C. Morrell 1.45  
51.49 = Existing cl.



Morrell & Hornblend  
Curb Returns

11/14/55 38

N.Wly Cor. Ret.

For Rate

N.Ely Ret.

A.65  
on Nail 54.42  
✓ C.023

#5-E.C. Morrell

A.60  
54.42  
C.018

#5-E.C. - Morrell

55.78

#A

54.11

Existing cl.

#A

5.44  
55.44

x

#3

53.97

u u

#3

5.10  
55.20  
F.0.10

#2

53.90

u u

#2

A.85  
54.90  
F.0.05

#1

53.90

u u

#1

4.70  
54.65  
C.0.05

B.C. Horn blend

53.97

u u

B.C. Horn blend

4.35  
54.33  
C.0.02



out.	el.	G.	Φ pauc.	G.	cl.	out
------	-----	----	------------	----	-----	-----

3+90

9's	F1.06	F0.56		F0.64	F1.14	
-----	-------	-------	--	-------	-------	--

3+60

	F0.96	F0.46		F0.55	F1.05	
--	-------	-------	--	-------	-------	--

3+30

	F1.13	F0.63		F0.73	F1.23	
--	-------	-------	--	-------	-------	--

3

	F1.12	F0.62		F0.73	F1.23	
--	-------	-------	--	-------	-------	--

2+75

	F1.16	F0.66		F0.78	F1.28	
--	-------	-------	--	-------	-------	--

2+50 B.K.

	F1.10	F0.60	52.53 53.24 F0.71	F0.71	F1.21	
--	-------	-------	-------------------------	-------	-------	--

2+25

	F1.15	F0.65		F0.86	F1.36	
--	-------	-------	--	-------	-------	--

2+00 E.C. on north

	F1.00	F0.50 <sup>11</sup> F0.47		2.15 52.93 F0.78	F1.28	51 5
--	-------	------------------------------	--	------------------------	-------	---------

1+87 E Mid curve on north

9's		<del>G0.52</del>		2.55 52.87 F0.32	F0.82	3.25 5
-----	--	------------------	--	------------------------	-------	-----------

E. Island.

Gutter Grade raked E of street  
to N. or S. gutters of 85' roadway.

Factor. below ctr. Grade - 2,000A9A  
x sq. of dist in feet. off E

use .000A34 for  
.88' crown.

A+99 = 1' cl. Rad.

cl.	G.	E	G.	cl.	out
F0.92	F0.42	4.70 55.28 F0.58	F0.44	F0.94	6' 5

A+90 = E Brk. & B.C. on south

F0.98	F0.48	51.48 55.20 F0.72	F0.55	F1.05	
-------	-------	-------------------------	-------	-------	--

A+80 E.S. on south

9'	F1.04	F0.54	F0.60	F1.10	5' 5
----	-------	-------	-------	-------	---------

A+50

F1.29	F0.79		F0.86	F1.36	
-------	-------	--	-------	-------	--

A+20

F1.29	F0.79		F0.86	F1.36	
-------	-------	--	-------	-------	--

9'  
50.

Ctr. Islands - Grand & Balboa,  
between Morrell & Lamont.

Sly. Side Balboa = Nly side Island.

0+00 = 90° to N. Ely Cor. <sup>Balboa</sup> Lamont &

Data on Line 53<sup>E</sup> so. of. Nly  
line Balboa. curb line is

65.83 sly. from Nly. line Balboa.  
Runs into Morrell & Grand

0+86.53 = B.C.

0+61.53

0+36.53

0+11.53

0+00 = 90° to N. Ely Cor. <sup>Lamont.</sup> Balboa &

0-14.64 = Ely. line Lamont

12.33 Rt = Cl.  
0-28.38 - 18.79 Rt = 6.79' Outer Rad.  
33  
6.46 Cl. Rad.

42  
West bound traffic Lane  
starting at Morrell & Grand going  
to Lamont & Balboa. - 2314-AD.

(Stations from Lamont - to east)

B.M. 0110 Low. ← (Rough Grade)

Raise pages 12 to 49 Inc.

0110

out  
to  
Stakes

7.80  
48.78 15<sup>33</sup>  
F 0.98

48.97

8.41  
49.16  
F 0.75

49.36

49.55 15<sup>33</sup>

9.00  
49.60  
F 0.60

RT. = Ch. P.C.C.

2+65.66 = BLEC. 12°-39'

17<sup>91</sup> L H  $\phi$  17<sup>65</sup> RT

5.71  
46.46  
F0.75

4.85  
44.98  
F0.13

17<sup>65</sup>

2+45.74

11°-14.60'

$\phi$  15<sup>91</sup> RT

17<sup>32</sup>

6.37  
47.03  
F0.66

5.38  
45.59  
F0.21

15<sup>91</sup>

2+25.84

9°-50.28'

17<sup>32</sup> L  $\phi$  15<sup>32</sup> RT

47.51

46.15

15<sup>32</sup>

2+05.48

16 Lt. = Ch. P.C.C. = 15' Lt. Rad

8°-24.01'

16' Lt.  $\phi$  15<sup>33</sup> RT

6.79  
47.81  
F1.02

6.79  
46.68  
C0.11

1+86.03

7°-01.60'

47.19

1+66.13

5°-37.28'

7.73  
47.65  
C0.28

1+46.23

4°-12.96'

48.06

1+26.33

2°-48.64

7.43  
48.39  
F0.96

1+06.43

1°-24.32'

48.62

3+65<sup>66</sup> = B.C.  $\left. \begin{array}{l} 12.33 \text{ RT} \\ 14.33 \text{ Lt.} \end{array} \right\} = \text{cl. B.C. } 17.33 \text{ Lt. } \oplus 15.33 \text{ Rt.}$

3.93  
43.00  
C0.93

3.41  
43.26  
C0.25

3+52<sup>79</sup> 14<sup>33</sup> Lt. = cl. E.C. 16' Lt.  
1.67 cl. Rad.

4.27  
43.34  
C0.93

3+45<sup>66</sup> 15<sup>33</sup> Rt.

43.55 15<sup>33</sup>

3+26<sup>47</sup> 12<sup>33</sup> Rt. = cl. P.P.C. 17' Rt.  
A.67 cl. Rad.

4.05  
43.84 17'  
C0.21

3+15<sup>66</sup> = Intersection of.  
Base Lines

cl. R. = 4.67'  
3+03.98 19<sup>33</sup> Lt. = cl. E.C. 24' Lt.

24'  
5.75  
45.22  
C0.53

2+85<sup>66</sup> 18<sup>68</sup> Lt. 1

19<sup>68</sup> 45.23

19' Rt. = 1.67 cl. Rad.

2+82.48 Rt. = cl. P.C.C. 19' Rt.

4.70  
44.48 19'  
C0.22

## stakes

5+07 <sup>26</sup>	21' RT. = 3.67 Ob. Rad.	21' RT. 362 Ob. Rad.		1.40 41.58 FO.18	129 1.58 FO.30
4+95.26	14.33 Lt. = Ob. B.C. (19.67 Ob. Rad.) 3 4' Lt. = 19.67 Ob. Rad.	17 <sup>33</sup> Lt. & 17 <sup>33</sup> Rt.	2.16 41.20 C 0.96	1.74 41.70 C 0.04	
4+85 <sup>26</sup>	13.46 Rt. = Face of Ob.	17 <sup>33</sup> Lt. & 16 <sup>45</sup> Rt.	41.30	1.89 41.89 x	1646
4+65.26 =	Baselino 14 <sup>33</sup> Lt. = Ob. E.C. 17 <sup>33</sup> Lt. E.C. 12.33 Rt. = Ob. P.C.C. & 15 <sup>33</sup> Rt. 6° 21' - 15"		2.66 41.54 C 1.12	2.33 42.04 C 0.29	
4+45.34	5° 05' 00"	17 <sup>33</sup> Lt & 15 <sup>33</sup> Rt.	2.91 41.78 C 1.13	2.55 42.28 C 0.27	
4+25.42	3° 49.78'	17 <sup>33</sup> Lt & 15 <sup>33</sup> Rt.	42.02	42.52	
4+05.50	2° 32.52'	17 <sup>33</sup> Lt & 15 <sup>33</sup> Rt.	3.44 42.26 C 1.18	2.75 42.76 C 0.19	
3+85 <sup>58</sup>	1° 16.26'	17 <sup>33</sup> Lt & 15 <sup>33</sup> Rt.	3.68 42.55 C 1.13	3.17 43.00 C 0.17	



Lamont to Morrell on Grand  
Center Island grades.

0+00 = Ely. Line Lamont on a line  
54<sup>th</sup> North of sly. line Grand (231A-A.D.)

stakes

2+04.28 B.C. A.

15.33 Lt.

2 ~

"

5.66  
45.43  
60.23

45.5A

1+50

"

46A2

1 ~

"

7.25  
47.30  
F0.05

0+50

"

8.29  
48.18  
60.11

0+00 = Ely Lamont.

15.33 Lt.

8.82  
49.07  
F0.25

0 - 11.95 - 18.79 Lt. = 6<sup>th</sup> cl. Rad. 18.79 Lt.

9.00  
49.25  
F0.35

East bound Traffic lane  
starting at Lamont & Grand &  
going to Morrell & Balboa. 231A-A.D.

46

stations from Lamont to east

cl.  
stakes

3 + 15.66 page 4A.  
3 + 36.35 = Intersections of Base Lines ~

3 + 29.64 19' RT = 46° d. Rad. 19' RT.

4.05  
43.85  
C0.20

3 + 11.34 E.C. 17' RT.

43.99

2 + 99.88 14' Lt = 19° d. Rad. 14' Lt.

4.70  
44.44  
C0.26

2 + 90.82 18' RT = 16° d. Rad. 18' RT

2 + 89.92 15° 40' Lt.  
15.33 Lt.

4.69  
44.41  
C0.28

4.25  
44.10  
C0.15

2 + 68.51 11° 45' Lt.  
15.33 Lt.

44.43

2 + 47.10 7° 50' Lt.

5.10  
44.70  
C0.40

2 + 25.69 30° 55' Lt.

45.08

## Stakes

4+65 <sup>14</sup>	15 <sup>33</sup> Lt & 17 <sup>33</sup> Rt	45.10	44.77
--------------------	---	-------	-------

4+45.14 = E.C. 130° - 17.76' Rt	15 <sup>33</sup> Lt. & 17 <sup>33</sup> Rt	5.58 45.53 C0.05	4.86 44.54 C0.32
------------------------------------	--	------------------------	------------------------

4+24.19 9° - 58.32' Rt.	15 <sup>33</sup> Lt & 17 <sup>33</sup> Rt	45.54	44.24
----------------------------	---	-------	-------

4+03.24 6° - 38.88' Rt	15 <sup>33</sup> Lt & 17 <sup>33</sup> Rt	5.96 45.41 C0.55	4.81 43.91 C0.90
---------------------------	---	------------------------	------------------------

3+82.29 3° - 19.44	16 <sup>24</sup> Lt & 19 <sup>34</sup> Rt	45.30	43.59
-----------------------	---	-------	-------

3+73.09 1° - 52' Rt.	19 <sup>3</sup> Rt		4.27 43.45 C0.82
-------------------------	--------------------	--	------------------------

3+61.39 = B.L.B.C. 16.67 Lt = Ch.	19.67 Lt.	45.23	
--------------------------------------	-----------	-------	--

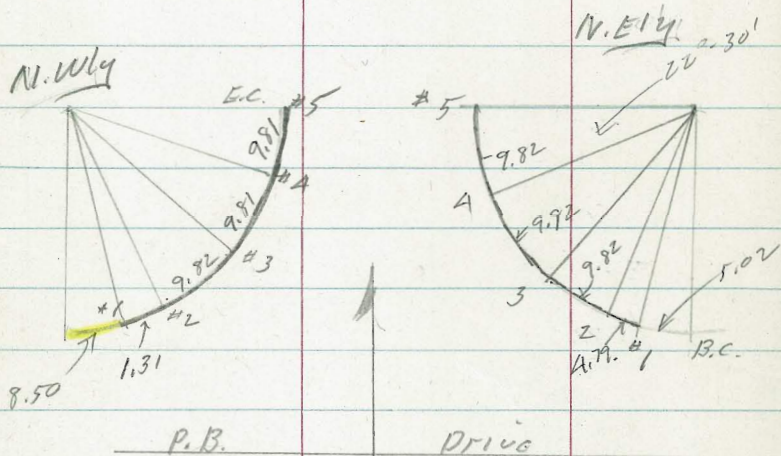
3+48 <sup>02</sup> = 19° Lt. = Ch. E.C. (Not Radial) Rad. = 45.11	19° Lt.	5.75 45.11 C0.64	
---	---------	------------------------	--

INDEXED

Sub. Returns  
Pacific Beach Dr. & Morrell.  
JUN 11 1957

11/30/55

50

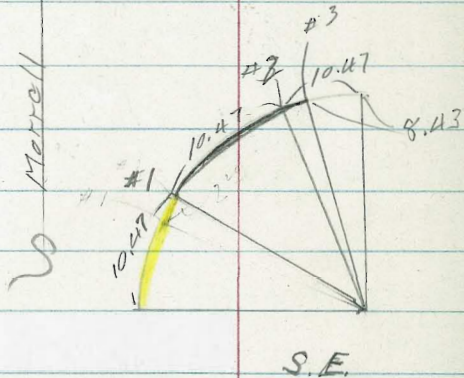


N.Wly Ret

#1	#2	#3	#4	#5
23.82	23.72	3.47	3.14	3.02
		23.38	23.10	22.89
		00.09	00.04	00.13

N. Ely. ob. Ret.

#1	#2	#3	#4	#5
130	224	171	2.25	2.14
21.91	22.10	22.26	22.30	22.15
00.61	00.14	00.55	00.05	00.01



S.E. Ret.

#1	#2	#3
22.69	2.81	2.73
	22.31	22.22
	00.50	00.51

INDEXED

JUN 11 1957

Balboa - Morrell to Noyes

sheet 2558-A.D.

12-1-55

N

S

51

E

Rough

Gr.

Gr.

Rough.

0+00 = Sly line Balboa &amp; Ely line Morrell

1+27.78

4437

4421  
4410  
C 0.11

0+87.78

4437  
4418  
C 0.19

2+50

0+77.78

4444  
4418  
C 0.26

2 ~

0+67.78

4440  
4416  
C 0.24

1+50

0+57.78

4447  
4413  
C 0.34

1 ~

0+47.78

4442  
4408  
C 0.34

0+53.93

0+50

0+37.78

4437  
4403  
C 0.340+27.78 - 62<sup>E</sup> Lt. = Prop. Cor. C 0.39

0+13,93 = Ely Line Morrell

0+00 - 62<sup>E</sup> Rt. = Prop. Cor.

Change on So. Side

F-0.33

5.67  
45.06  
C 0.094515  
45.06  
C 0.094394  
43.89  
C 0.053.96  
43.89  
C-0.07

F-0.35

5.57  
45.16  
C 0.414505  
45.16  
C 0.114401  
43.99  
C 0.023.82  
43.99  
F-0.17

T.P.

F-0.31

6.03  
45.26  
C 0.774550  
45.26  
C 0.244428  
44.08  
C 0.204.22  
44.08  
C-0.64

F-0.45

6.25  
45.36  
C 0.894540  
45.36  
C 0.044431  
44.18  
C 0.134.56  
44.18  
C-0.38

F 0.36

4.74  
45.10  
7.39  
45.46  
C-1.934557  
45.46  
C 0.114446  
44.26  
C 0.204.48  
44.26  
C-0.22

F 0.32

4.92  
45.15  
6.70  
45.50  
C-1.204552  
45.50  
C 0.024435  
44.30  
C 0.054.18  
44.30  
F-0.12

F 0.78

1.00  
45.184412  
43.55  
F 0.374.96  
44.12  
C-0.84

Balboa Ave  
Marshall to Noyes

52

Φ N

S

5+35.42 also = future ob. B.C.  
5+39.85 = End. ob. on North.

5.46  
44.46  
C-1.00

4448  
4428  
F0.20

4368  
43.25  
C0.43

#1

5+26+ wly. Noyes

4.41  
44.19  
C-0.22

4473  
44.53

4349  
43.40

4.24

4+99.61  
5+09.70 = ob. B.C. on South.

436  
44.28  
C-0.08

C0.20

C0.09

43.40

C-0.84

should be 4+99.70

5+00

GRADE

5.40  
44.55  
C-0.85

~~44.55~~

~~43.42~~

4.01

43.42

C-0.59

A+50

F-0.05

5.40  
44.66  
C-0.74

4474

~~44.66~~

C0.08

4361

43.51

C0.10

4.50

43.51

C-0.99

A+00

F-0.22

5.28  
44.76  
C-0.52

4477

44.76

C0.01

4383

43.61

C0.22

4.59

43.61

C-0.98

+50

F-0.30

5.70  
44.86  
C-0.84

44.86

44.80

F0.06

43.70

43.66

F0.04

4.57

43.70

C-0.87

3+00

F-0.32

5.50  
44.96  
C-0.54

44.96

44.92

F0.04

43.80

43.737P

F0.07

~~3.91~~

43.80

C-0.16

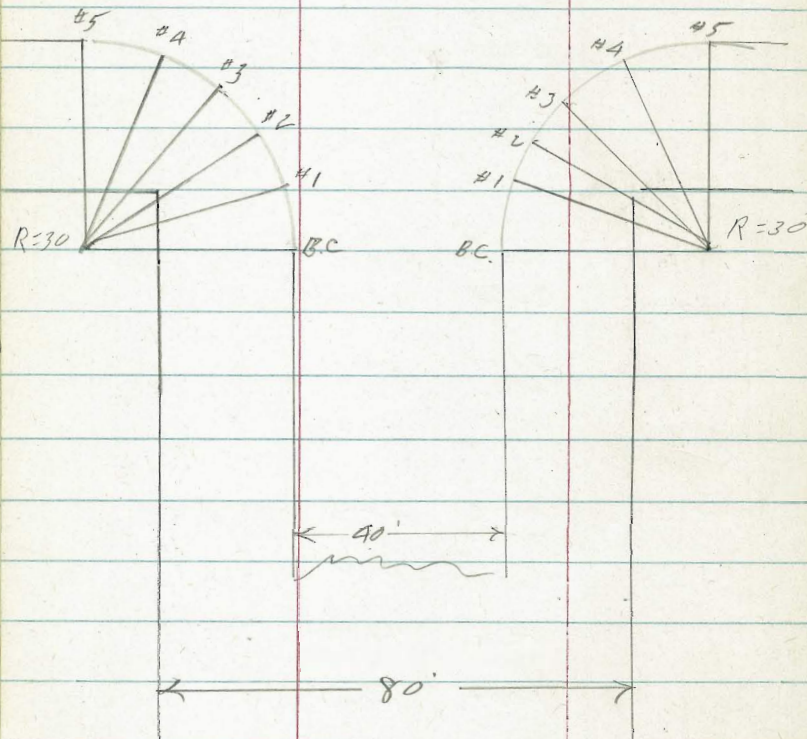
3.91

43.80

C-0.11

Jewell & Grand.  
Sly curb returns

12/455



S.Wly. Ret.

#5 50.96 ✓

/

#4 0.95  
50.85  
C0.10

#3 0.64  
50.72  
F0.08

#2 0.51  
50.55  
F0.04

#1 0.61  
50.30  
C0.31

B.C. 0.18  
50.00  
C0.18

53

S.Ely Ret.

#5 50.37 ✓  
50.37 ✓

#4 7.77  
50.34  
F0.57

#3 7.88  
50.30  
F0.42

#2 9.88  
50.20  
F0.32

#1 0.48  
50.00  
C0.42

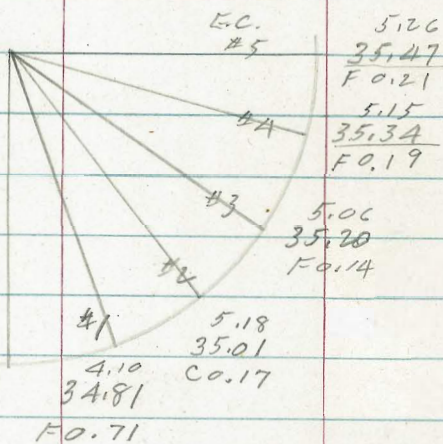
B.C. 9.88  
49.80  
C0.08

Noyes & Grand  
Curb returns

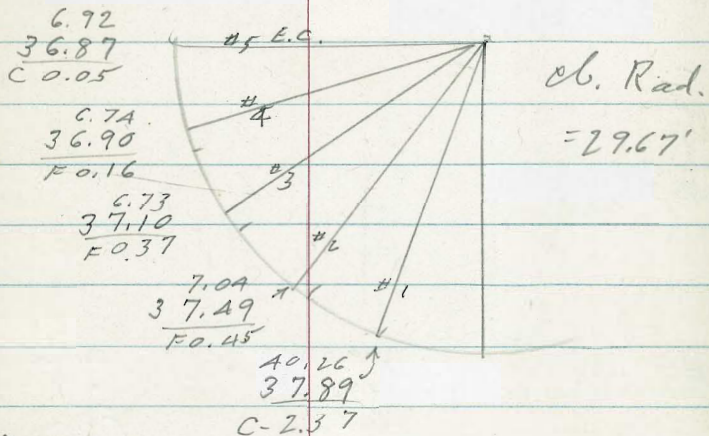
12/6/55

54

S.wly. Ret.



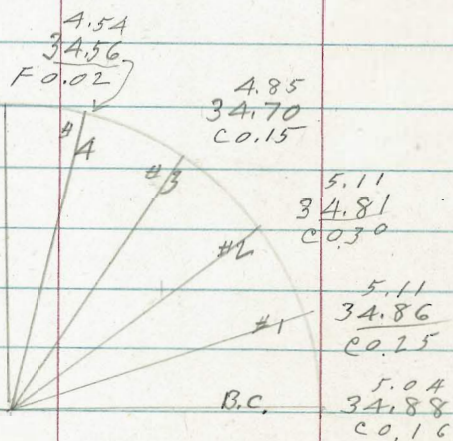
N.wly. Ret.



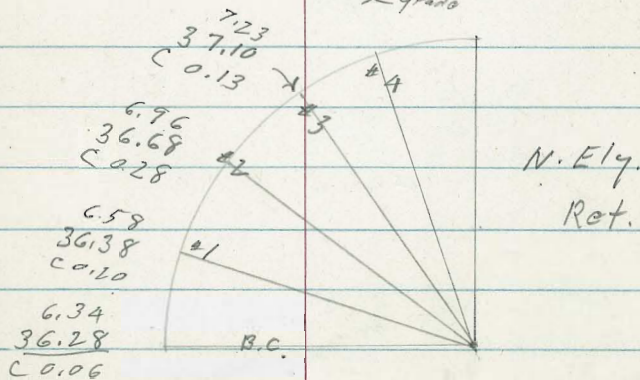
Noyes

Grand

S. Ely. Ret.



7.52  
37.57  
X 9 grade





Olney & Grand  
Curb returns

	NW	NE	SW	SE
#4 PL of GRAND	29.92 2971 F0.21	29.05 2874 F0.31	#4 2751 2732 C0.19	2650 26.12 C0.38
#3	29.80 2912 F0.68	28.65 2836 F0.29	#3 2747 27.61 F0.14	2652 26.30 C0.22
#2	29.70 2935 F0.35	2828 28,25 C0.03	#2 2811 27.95 C0.16	2654 26.35 C0.19
#1	29.70 2952 F0.18	27.90 2775 F0.15	#1 2863 28.27 C0.36	2698 26.31 C0.67
BC Exist	29.92 2964 F0.28	27.61 2762 Exist	BC Exist 2872 28.52 C0.20	26.22 2625 Exist

Pendelton & Grand  
Curb returns

NW

NE

SW

SE

#4 PL. of  
GRAND

16.63  
15.79  
F0.84

17.26  
15.60  
C 1.66

#4 PL. of  
GRAND

14.22  
13.87  
F0.35

14.47  
13.31  
C 1.16

#3

16.50  
15.98  
F0.52

15.26  
14.72  
F0.54

#3

14.41  
13.62  
F0.79

13.32  
12.91  
F0.41

#2

16.46  
16.09  
F0.37

15.26  
14.89  
C0.37

#2

14.61  
14.40  
F0.21

13.42  
13.28  
C0.14

#1

16.48  
16.27  
F0.21

14.72  
14.58  
C0.14

#1

14.97  
14.91  
C0.06

13.42  
13.15  
C0.27

BC Exist

16.60  
16.56 Exist

14.31  
14.28 Exist

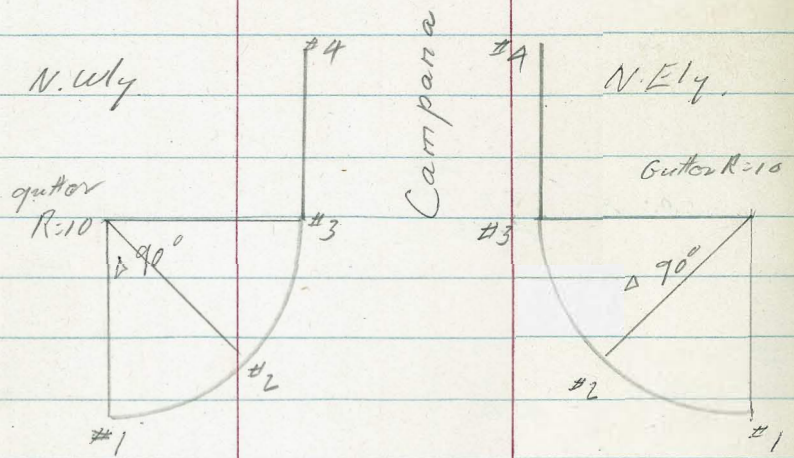
BC Exist

15.20  
15.22 Exist

12.91  
12.88 Exist

Calle Campana & Grand

Curb returns



N. wly Ret

#1	#2	#3	#4 = Prop
754 Exist	<del>924</del>	685	645
755	<del>725</del>	682	630
	F 11	0.03	0.15

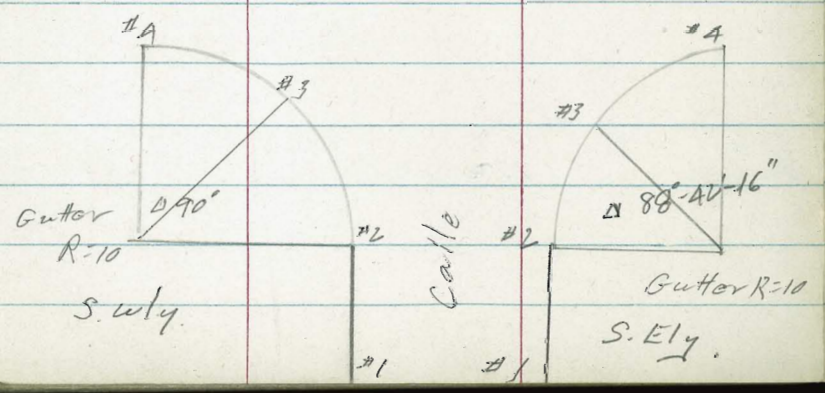
N. Ely. Ret.

#1	<del>#2</del>	#3	#4 Prop
7.22	<del>7.05</del>	710	6.24
721 Exist		6.71	597
		0.39	F 0.27

Grand Ave

S. wly. Ret

prop. = #1	#2	<del>#3</del>	#4
506	656		
4.93	5.66	<del>6.20</del>	6.54
0.13	0.90		654 Exist



S. Ely. Return.

Prop. = #1	#2	<del>#3</del>	#4
5.16	636		
5.11	5.70	6.10	6.28
F 0.05	0.66		633 Exist

Morrill & Grand

Curb returns

EC

4231  
42.19  
C 0.12

NE

#4

4184  
41.74  
C 0.10

#3

4138  
41.34  
C 0.04

#2

40.99  
40.73  
F 0.26

#1

40.70  
40.52  
F 0.18

BC ENSL

40.53  
40.57 ENST

EC

40.22 ←  
C 0.14

58

#1

40.07 ←  
40.07  
F 0.02

#2

40.04  
39.96  
C 0.08

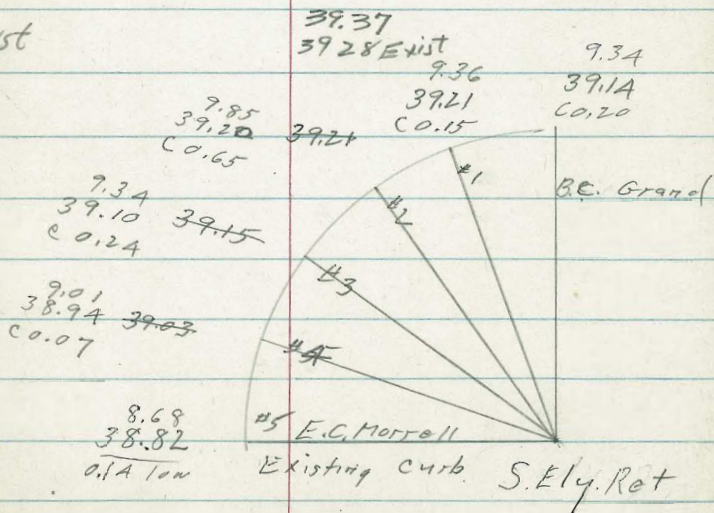
#3

39.79  
39.78  
F 0.01

#4

39.61  
39.09  
F 0.52

BC ENST



SW  
←

Calle Campana & Grand 12/29

22" X 13" corr. pipe arch.

5' west of Ely line Calle Campana.

0+00 = Sly line Grand

sheet 2316-D.

stakes 5' RT. of  $\pm$

Nly line Grand.

1+25

5.77

4.80

C 0.97

1+00

6.25

4.56

C 1.69

0+75

6.47

4.32

C 2.15

0+50

6.13

4.08

C 2.05

0+25

5.40

3.84

C 1.56

0+00

4.99

3.60

C 1.39

Open ditch 45' West 59  
of Quincy Street sheet 2316-D

0+00 = 160' South of Sly line Grand

stakes c' RT. of  $\pm$

3+09 End project.

7.72

Nly line Grand

2+85

4.40

Sly line Grand

1+60

3.60

6.64 Existing  
3.30 = 36"

C 3.34

1+20

3.45

7.05

3.24

C 3.81

0+80

3.30

6.67

3.18

3.47

0+40

3.15

5.51

3.12

C 2.39

0+00

3.01

5.00 Existing  
3.06 = ditch

C 1.94

Morrell  $\frac{1}{2}$  Balboa  
curb Ret.  
SE

60

NE

Exist.  
EC Morrell

46.09  
#606 Exist

#4

46.01  
45.87  
C0.14

EC Balboa

43.80  
43.56  
F0.24

#3

45.60  
44.38  
F1.22

#2

43.67  
42.94  
F0.73

#2

45.53  
44.58  
F0.95

#1

43.38  
42.90  
F0.48

#1

45.51  
45.50  
F0.01

BC

Morrell

43.20  
42.99  
C0.21

BC

Balboa

45.50  
C0.02

My Lint Balboa  
Lamont to Merrell

61

1+25

4812  
→ 47.96 ←  
C 0.16

3+00

4689  
→ 46.62 ←  
C 0.27

1+00

4832  
48.15  
C 0.17

2+75

4706  
46.81  
C 0.25

0+75

4861  
48.34  
C 0.27

2+50

4718  
47.00  
C 0.18

0+50

4882  
48.54  
C 0.28

2+25

4723  
47.19  
C 0.04

0+25

4888  
48.73  
C 0.15

2+00

4738  
47.33  
F 0.05

0+00

4913  
48.92  
C 0.21

1+75

4768  
47.58  
C 0.10

cb BC at  
0-11.53 Lamont

4911  
49.00  
C 0.11

1+50

4782  
47.77  
C 0.05

4+75

4537  
→45.27←  
C0.10

4+50

4552  
45.46  
C0.06

4+25

4575  
45.66  
C0.09

4+00

4599  
45.85  
C0.14

3+75

4635  
46.04  
C0.31

3+50

4657  
46.23  
C0.34

3+25

4672 TP  
46.42  
C0.30

NE.  
Ret.  
Lamont  
&  
Belbon

#4  
#3 49.31  
49.25  
F0.06  
#2  
#1 49.14  
49.04  
C0.10

BC

END CB ON ALEY

5+00.28<sup>pc</sup>

4+84.89<sup>cb BC at</sup>  
Morrell

→49.57←  
49.45  
F0.14

4917  
4913  
C0.04

4911  
49.00  
C0.11

Morrell #  
Belbon 62  
Alley Return

4642  
St. 45.93  
↑  
C0.49

4642  
Alley 45.86  
C0.56

4856  
Prop 45.92  
C2.64

4568  
45.22  
C0.46

4574  
45.11  
C0.63

4548  
45.20  
C0.28

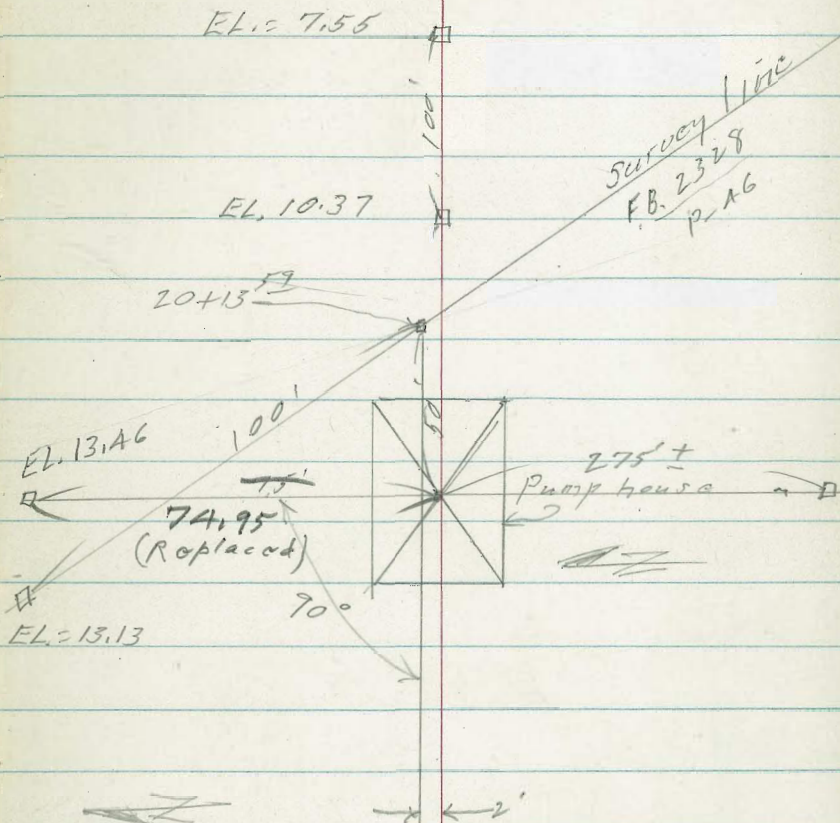
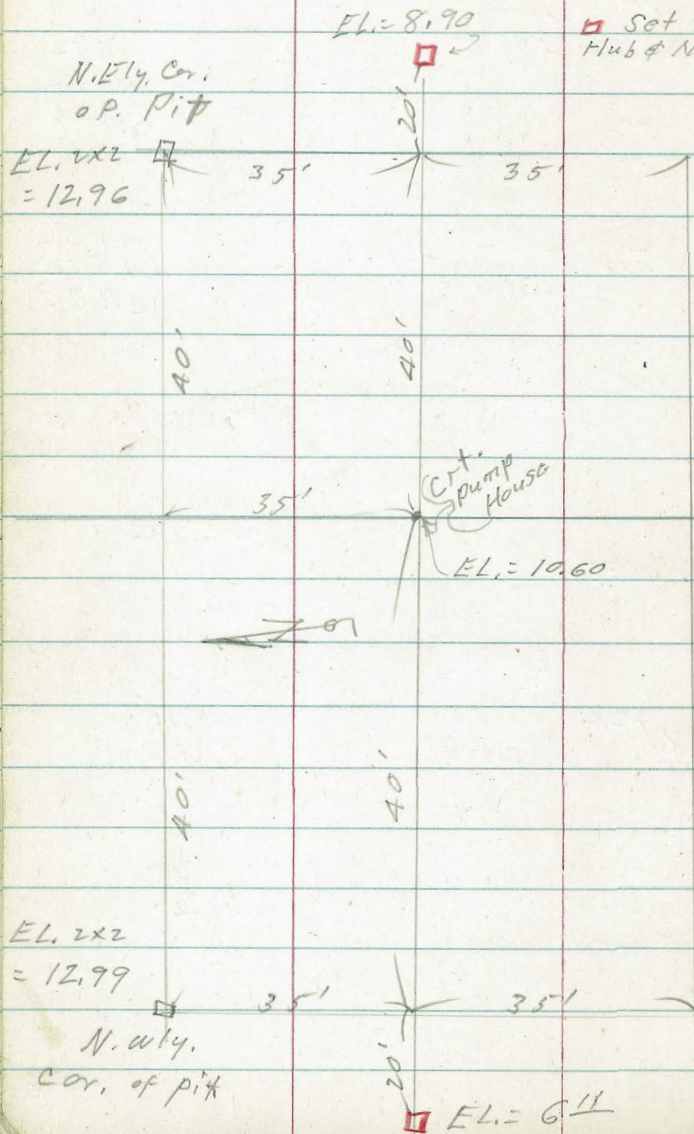


INDEXED

# Frontier Pump Station w.o. #20936 & Storm Drain

- 3459-P
- 3460-D
- 3461-D
- 3462-D
- 3464-D

Set 7-18-56  
Hub & Nail.



Top Hyd. Elevation = 1.58  
 ⊕ F. Hyd. Nashville & Lapwai

Road & Grades (3460-D)

stationing as on plan.

From E.C. (Sta 22+18) west

26+03<sup>26</sup> End road 0.17  
0.50  
F 0.33

25+75 1.30  
25+76.63 Mid curve 1.18  
C 0.12

+50 Brk 2.15  
1.87  
C 0.28

+25 Brk 2.71  
2.52  
C 0.19

25+00 Brk 3.37  
3.04  
C 0.33

24+75 Brk 3.87  
3.30  
C 0.57

+50 1 C 0.84

24+00 C 2.07

+50 1 C 1.24

23+00 C 0.08

+50 1 C 0.67

22+18 5.70  
4.58  
C 1.12

Roads - East of

Sta. 22+18 (See 3460-D)

"A" line

"B" line

B.C. = 131' 13.18  
13.10  
C 0.08

B.C. = 106' 11.38  
11.50  
F 0.12

B.C. = 78' 9.34  
8.70  
C 0.64

B.C. = 50' 7.60 = P.R.C. 8.54  
5.90 B.C. = 76.8 4.96  
C 1.70 C 3.58

B.C. = 25' 6.36  
4.80 B.C. = 38.4 7.13  
C 1.56 C 2.36

= B.C. 5.72  
22+18 4.58 = B.C. 5.60  
C 1.14 22+18 4.58  
C 1.02

↑  
↓  
Rate

48" - Wly From  
Frontier pump house

8/20/50

65

Sheet 3460-D

0+00 = start of pipe at pump house

4+00

9.36  
- 15.26  
C-24.56

3+75

9.21  
- 15.34  
C-24.55

3+50

9.72  
- 15.43  
C-25.15

1+50

10.25  
- 16.05  
C-26.30

3+25

8.94  
- 15.51  
C-24.45

clint - Blomme me - Cliff -

1+25

10.20  
- 16.12  
C-26.32

3+00

9.31  
- 15.60  
C-24.91

1 - 3/10

11.22  
- 16.20  
C-27.42

2+75

9.07  
- 15.67  
C-24.74

0+75

11.92  
- 16.27  
C-28.19

2+50

8.49  
- 15.75  
C-24.24

35' rx.

0+50

12.60  
- 16.35  
C-28.95

2+25

8.02  
- 15.82  
C-23.84

0+25

13.11  
- 16.42  
C-29.53

2+00

~~8.87~~  
~~- 15.90~~  
C-24.77

8.72  
- 15.90  
C-24.62

0+00

13.00  
- 16.50  
C-29.50

35' rx

1+75

9.27  
- 15.97  
C-25.24

stakes 8' back of Cl. Face

15' Rt

66

017. Ely. C.B. } Stake	{ C.B. I.F.	70' cl. Ely ← 8.34 → Wly.	
6+1A-C.B.	-0.90	-0.90	-0.93
	-8.50	-1.10	-1.10
	C 7.60	C 0.20	C 0.13

6+1A = Ctr. C.O.	-0.45	See Page 70		7+50	0.74
15' Lt. also with line only	-14.61				-13.18
	C 14.16		Top Hydt		C 14.12

{ 6+00 20' Lt. 15' Lt.	1.08	0.51	EL = 159	7+25	0.39
	-14.65	-14.65	20' Rt		-13.28
{ 25' Lt.	C 15.73	C 15.16	00'	7+08	C 13.67

5+75		1.54		7 ~	-13.35
		-14.72			0.00
		C 16.26			-13.38

5+50		2.04		6+75	0.34
		-14.79			-13.48
		C 16.83			C 13.82

5+25		2.63		6+69 - (start pipe)	-13.50
		-14.87			
		C 17.50			

5 ~		3.42		(Plan sta. = 13+66)	
		-14.94		6+66 = Ctr. C.O.	0.34
		C 18.36			-13.50

4+75		3.15			C 13.84
		-15.02			
		C 18.17			

TBM } Nail in pp # p45 to sta 26+06 { 2.99 }  
 FB 2328-71 }  
 COR of lap W 91 + Nashville } 3.00

4+50		8.62			
		-15.09			
		C 23.71			

4+25		8.46			
		-15.17			
		C 23.63			

7+50	0.74
	-13.18
	C 14.12
7+25	0.39
	-13.28
	C 13.67
7+08	-13.35
7 ~	0.00
	-13.38
	C 13.44
6+75	0.34
	-13.48
	C 13.82
6+69 - (start pipe)	-13.50
(Plan sta. = 13+66)	
6+66 = Ctr. C.O.	0.34
	-13.50
	C 13.84

Cont. From page 72

	20' At	15' At	20' At	20' At
			12 ~	3.16 -11.38 C 14.54
9+75	0.31 -12.28 C 12.59	<del>0.89</del> <del>-12.28</del> C 11.39	11+75	3.19 -11.48 C 14.67
9+50	-0.55 -12.38 C 11.83	-1.16 <del>-12.38</del> C 11.22	11+50	4.10 -11.58 C 15.68
9+25	1.50 -12.48 C 13.98	1.07 -12.48 C 13.55	11+25	4.55 -11.68 C 16.23
9 ~	1.73 12.58 C 14.51	1.62 -12.58 C 14.20	11 ~	4.37 -11.78 C 16.15
8+75	2.03 -12.68 C 14.71	2.03 ✓ -12.68 C 14.71	10+75	3.43 -11.88 C 15.31
8+50	2.32 -12.78 C 15.10	2.34 -12.78 C 15.12	10+50	3.81 -11.98 C 15.79
8+25	2.62 -12.88 C 15.50	2.52 -12.88 C 15.40	10+25	3.09 -12.08 C 15.17
8 ~	2.94 -12.98 C 15.92	2.65 -12.98 C 15.63	10+00	0.75 -12.18 C 12.93
7+75		2.00 -13.08 C 15.08		0.47 -12.18 C 12.65

20' ~~XX~~

13+75	2.01 - 10.70 C 12.71	16+00	3.35 - 9.80 C 13.15
13+50	0.98 - 10.80 C 11.78	15+75	3.36 - 9.90 C 13.26
13+25	0.52 - 10.90 C 11.42	15+50	3.25 - 10.00 C 13.25
13+00	0.09 - 11.00 C 11.09	15+25	3.02 - 10.10 C 13.12
12+75	0.77 - 11.10 C 11.87	15+00	3.30 - 10.20 C 13.50
12+50	1.26 - 11.20 C 12.46	14+75	3.17 - 10.30 C 13.47
12+43 = E. CO.	1.38 - 11.21 C 12.59	14+50	3.09 - 10.40 C 13.49
12+41 - end pipe		14+25	3.01 - 10.50 C 13.51
12+30 <del>12+25</del>	1.59 - 11.26 C 12.85	14+00	2.74 - 10.60 C 13.34

17+90 3.68  
-5.71

17+84 = P.T.  $\Delta$  C 9.39

17+65 4.11  
-5.80

17+43 C-9.91  
3.72  
-5.88

C 9.60

$\Delta$  10-12 RT.  
17+11 = C.T. C.O. out 2.55  
-6.00  
C-8.55

17+00 2.62  
-9.40 (10)  
C-12.02

16+75 2.98  
-9.50 (10)  
C 12.48

16+50 3.50  
-9.60 (10)  
C-13.10

16+25 3.46  
-9.70  
C-13.16

20+05 $\pm$  1.13  
X-7' RT. C.I. -4.95  
C 6.08

19+75 1.88  
-5.05  
C 6.93

19+53 =  $\Delta$  2.45  
-5.13 5' RT  
C-7.58

19+25 - 5' N. 2.80  
-5.23  
C 8.03

19+00 grade only 3.00  
-5.32 Nail in fence  
C 8.92

18+84 $\epsilon$  = P.O.T. P.K. on  $\epsilon$

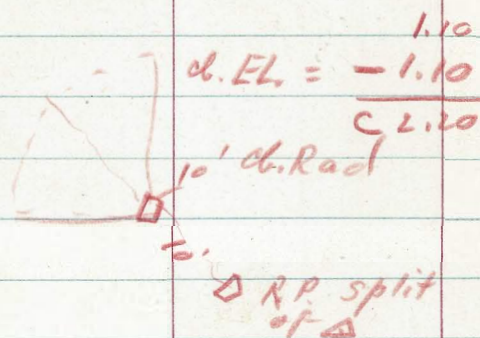
18+75 2.84  
-5.41  
C-8.25

18+50 3.06  
-5.51  
C-8.57

18+25 3.02  
-5.61  
C-8.63

18+14 $\epsilon$  =  $\Delta$  10-09' H. 2.81  
-5.65  
C-8.46

sly. cl. Ret.  
Nashville & Lapwai  
Set. for. 10' cl. Rad.



From page 66 - 9-18-58

End.  
20+51<sup>±</sup>  
1.09  
-4.60  
C 5.69

± Midway Pass.  
20+28<sup>±</sup>  
1.38  
-4.77  
C 6.15

Rd X 1  
10' RT ctr.  
C.I.

From Pump House 70  
S. Ely. to C.O. (starts page 66)

1+50	+ 0.48 - 16.05 C 16.53	Knocked out. 20' RT
1+25	- 0.27 - 16.12 C 15.85	20' RT.
1+00	- 0.63 - 16.20 C 15.57	20' RT. of E
0+75	- 0.08 - 16.27 C 16.19	"
0+50	- 0.23 - 16.35 C 16.12	"
0+37 <sup>5</sup> Δ	- 0.98 - 16.39 C 15.41	"
0+25 Δ	- 1.38 - 16.43 C 15.05	"
0+12 <sup>5</sup> Δ	- 1.30 - 16.46 C 15.16	"
0+00 pump house.	- 1.30 - 16.50 C 15.20	can 0+12 <sup>5</sup> stake



3+00  
2.33  
-15.60  
C-17.93

2+75  
2.63  
-15.67  
C18.30

2+50  
2.56  
-15.75  
C18.31

2+25  
2.41  
-15.83  
C-18.24

2+00  
0.30%  
1.42  
-15.90  
C-17.32

1+75  
~~0.61~~ 0.56  
~~-15.98~~ -15.98  
~~C-16.60~~ C16.34

1+50 (Restaka)  
0.44  
-16.05  
C-16.49

5+25  
3.12  
-14.92  
C-18.04

5+00  
3.07  
-15.00  
C-18.07

4+75  
2.54  
-15.07  
C17.61

4+50  
2.58  
-15.15  
C17.73

4+25  
2.56  
-15.22  
C-17.78

4+00  
2.49  
-15.30  
C-17.79

3+75  
0.51%  
2.19  
-15.37  
C17.56

3+50  
2.65  
-15.45  
C18.10

3+25  
2.25  
-15.52  
C-17.77

Continued on page 76

Pressure line out  
of Pump house  
0+00 = Pump house

72

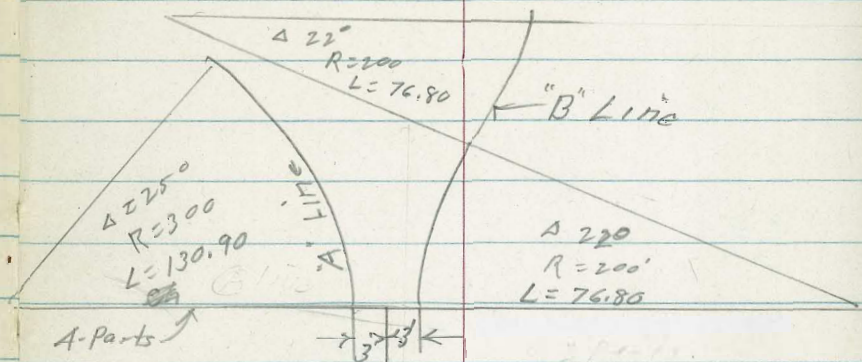
High line

Low lines

			Sta.	
6+69 = ctr C.D.	- 0.13 - 14.50 C 14.37			
6+50	- 0.31 - 14.55 C 14.24	11.04 + 9.00 C 2.04	0+77.8 End pipe	11.04 + 9.00 C 2.04
6+25	0.00 - 14.62 C 14.62	13.00 + 0.67 C 12.33	0+24	13.00 - 0.80 C 13.80
6+00	- 0.91 - 14.70 C 13.79			
5+75	- 0.36 - 14.77 C 14.41	+ 0.67 Meet House	0+00	- 2.92 Meet house
5+50	2.72 - 14.85 C 17.57			

Pump House Roadway  
Frontier Drain

73



disk in wall  
FB 2328  
48

11-15-56  
 Set  $\pm$  grade  
 4' off. Edge Pav  
 Rough Grade

Restake.  
 6' No. Edge of  
 Pav. 5-8-57

Service Road  
 Frontier, Pump House

7A

2+00	4.21 3.92 C 0.29	4.58 3.95 C 0.63
1+50	3.64 3.67 F 0.03	3.87 3.67 C 0.20
1+00	2.55 3.42 F 0.89	3.46 3.42 C 0.04
0+75 = Brk	2.46 3.30 F 0.84	3.68 3.30 X C 0.38
0+50 Brk	2.72 3.04 F 0.32	4.09 3.04 C 1.05
0+25 Brk	3.32 2.52 C 0.80	3.93 2.52 C 1.41
0+00 = BC	3.54 1.87 C 1.67	3.77 1.87 C 1.90
Def. 7-30'		
0 - 26.63 ←	1.19	2.87 1.19
T 34.38 Def. 30-45'		C 1.68
0 - 53.26	Nail in } 2.81 Pelet area } 0.50 C 2.31	0.75 0.50 C 0.25

11/15/56 Restake  
3/6/57

Set. & grade  
A' off. E.P.

A. 46.28  
10 06.76  
2114 53.24  
7 26.02

105.9  
55.9  
27.9  
3.60  
2.90

Line  
A  
A

120-30'	3.48	13.50
1+30.9	13.10	13.10
ch. 25	C 0.38	C 0.40
100-06.76'	12.52	12.75
1+05.9	11.50	11.50
ch. 55.80	C 1.02	C 1.25
40-46.48'	4.97	5.96
0+50	5.90	5.90
ch. 25	F 0.93	C 0.06
20-23.24	5.70	6.74
0+25	4.80	4.80
ch. 25	C 0.90	C 1.94
0+00		6.06
3+32	4.58	4.58
		C 1.48

7 0+78 10.52  
8.70  
C 1.82

3' RT. = B.C. RT. = B. Lino  
3' LT. = B.C. Lt. = "A" Line

3+32	5.16	6.06
	4.58	4.58
	C 0.58	C 1.48
3+00	5.22	5.93
	4.42	4.42
	C 0.80	C 1.51
2+50	4.52	4.73
	4.17	4.17
	C 0.35	C 0.56

"B" Line

Restake  
3/6/57

staked 3/6/57  
Restake 4/9/57

76

Def 11°  
1 + 53.60

4.15  
5.35  
F 1.20

4.67  
5.35  
F 0.68

Def. 50-30  
1 + 15.20  
Ch. 38.34

2.56  
5.16  
F 2.60

1.74  
5.16  
F 3.42

11°  
0 + 76.80 P.R.C.  
Ch. 36.72

6.10  
4.96  
C 1.14

6.25  
4.96  
C 1.29

50-44°  
0 + 40  
Ch. 20

5.57  
4.78  
C 0.79

5.60  
4.78  
C 0.82

20-52°  
0 + 20

5.12  
4.68  
C 0.44

4.99  
4.25  
C 0.74

2 0 + 00

5.52  
4.58  
C 0.94

5.68  
4.58  
C 1.10

3' RT of 3 + 32

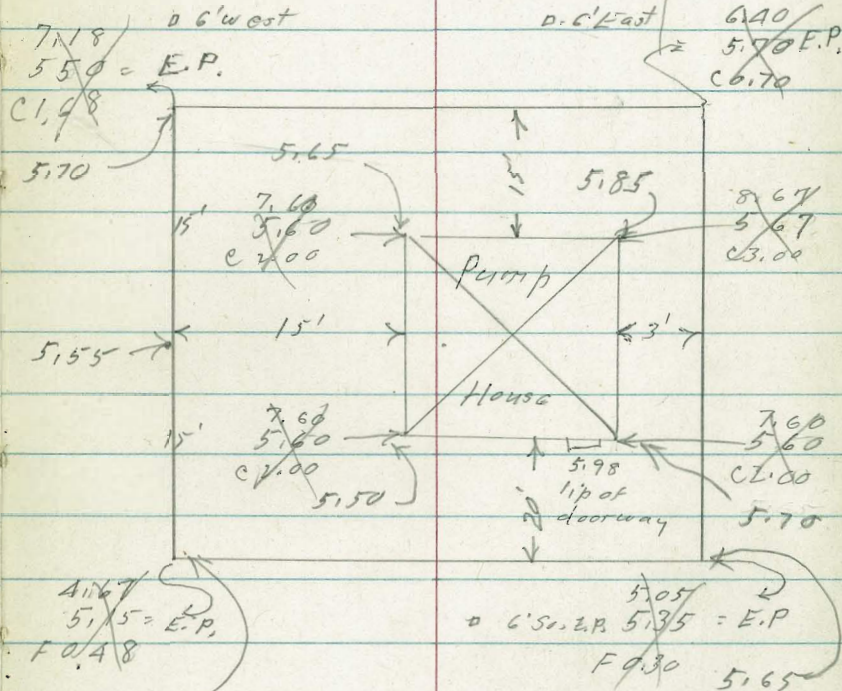
6' south  
E. Pave

~~7.18~~  
~~5.50 = E.P.~~  
~~C 1.98~~  
5.70

5.55

~~4.67~~  
~~5.15 = E.P.~~  
~~F 0.48~~  
5.40

Cross gutter.



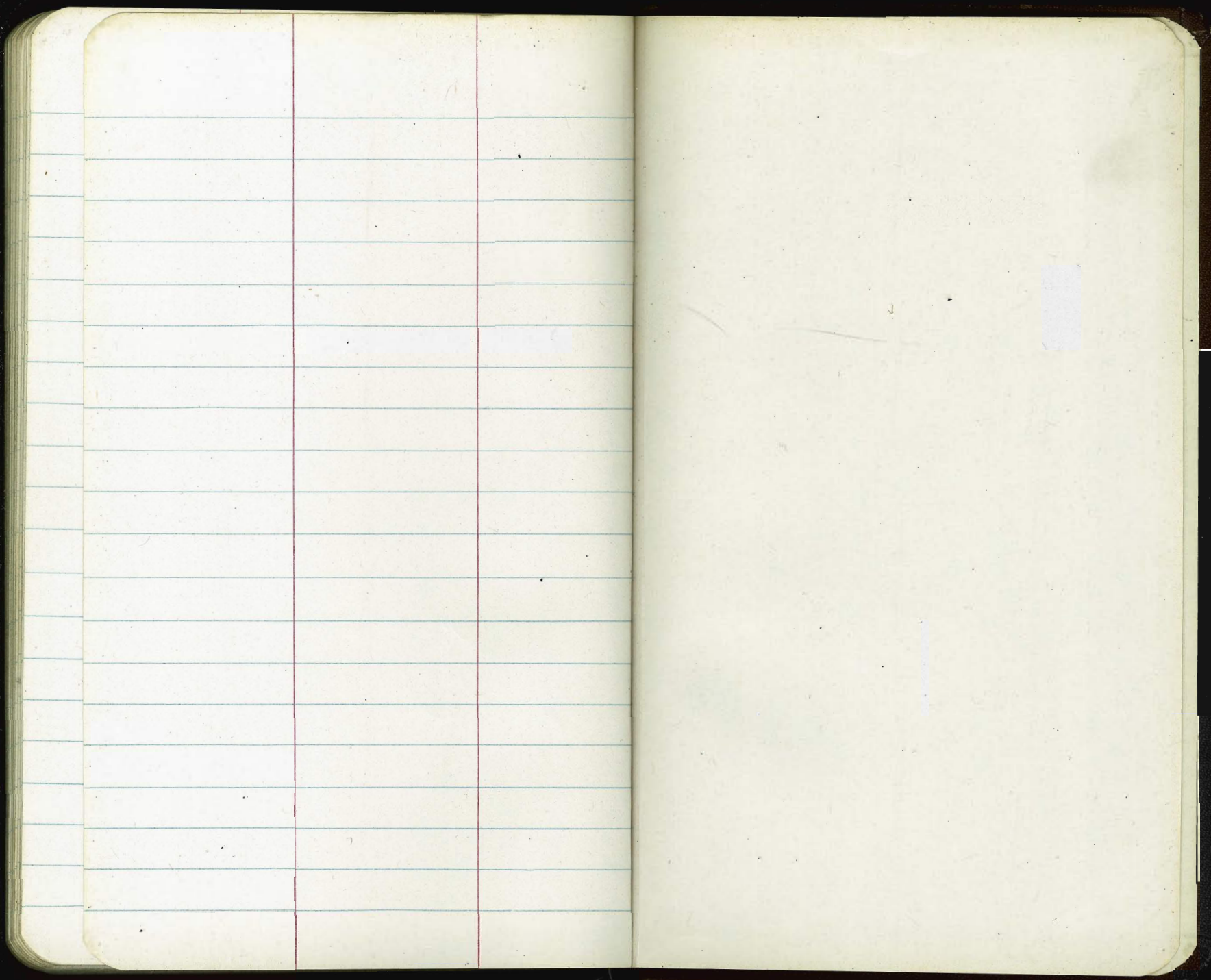
Grades raised  
for better drainage  
as per request  
by Waddell.



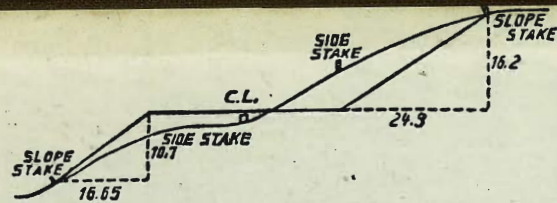








-4.95 -3670  
 4.67 521 780  
 5.33 3.70 450  
 13.33 1.95 857  
 -11.33 77 870 3.30  
 2102 0.121 91.003 8.19  
 0.125 7.37 9.82  
 6.03 7.2 102 7.77  
 1.03 41  
 5.00 0.57  
 0.139 45.1  
 0.43 54.9  
 35 0.61  
 9.25 9.65  
 39.50 56  
 0.2.1  
 9.38  
 39.50  
 10.12  
 6.30 3.30 6.30  
 970 600 -362  
 16.00 270 970  
 360  
 970  
 1330



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**

SLOPE 1 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	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	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

THE NATIONAL BLANK BOOK COMPANY  
 HOLYOKE MASSACHUSETTS  
 NEW YORK CHICAGO BOSTON SAN FRANCISCO