

195
 125.03
 20.00
 150
 295.03
 40.00
 335.03

2.85
 2.85
 10.66
 30.00
 295.03
 335.69

365.00
 335.69
 2931

ENGINEERING DEPARTMENT
 CITY OF CALIFORNIA

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Index

Page	Description	Location
3 To 7	Location Ocean Bluff Line & Hill Str. South to	
9	GRADES PIEDMONT RIV. VILLAS.	
10-11	" HILL ST. " "	
12-13	Reference Points Azure Vista & Sunset	
14-16	" " " " & Cordova St.	
17-19	" " " " & Cornish Dr.	
20	Storm Drain " " Hill St.	
21	" " " " Monaco St.	
22	" " " " Carmelo St.	
23	" " " " Ladera St.	
✓ BENCH MARKS IN AZURE VISTA		
26-29	GRADES CORNISH DRIVE	
30	" Hill St.	
31	" MARSEILLES ST.	
32-33	" MONACO ST.	
34	" BRINDISHI ST.	
35	" ALGECIRAS ST.	
36-37	" CARMELO ST.	
38	" CASITAS ST.	
39	" LADERA ST.	
40-43	" CORDOVA "	
44-47	" SUNSET CLIFFS BLVD.	
48	" ALLEY BIKE (E)	
49	" " " (E)	

Madam Tingleys Line

Cliffs Blvd.

ENGINEERING DEPARTMENT
CITY OF CALIFORNIA
SAN DIEGO

Jan 2nd
1914
APC

AZURE VISTA -

2

BENCH MARKS

CORNISH DRIVE

N.W. LADERA	126.91
N.W. COSTAS	132.89
N.W. CARMELO	141.32
N.E. ALGECIRAS	157.45
S.W. BRINDISHI	146.44
S.E. MONICO	134.56
S.W. MARSEILLES	137.72
S.W. Hill	138.57

These B.M.'s Revised
Page 78-79

10-28-26
Pitche
H.L. Landwehr
R. "

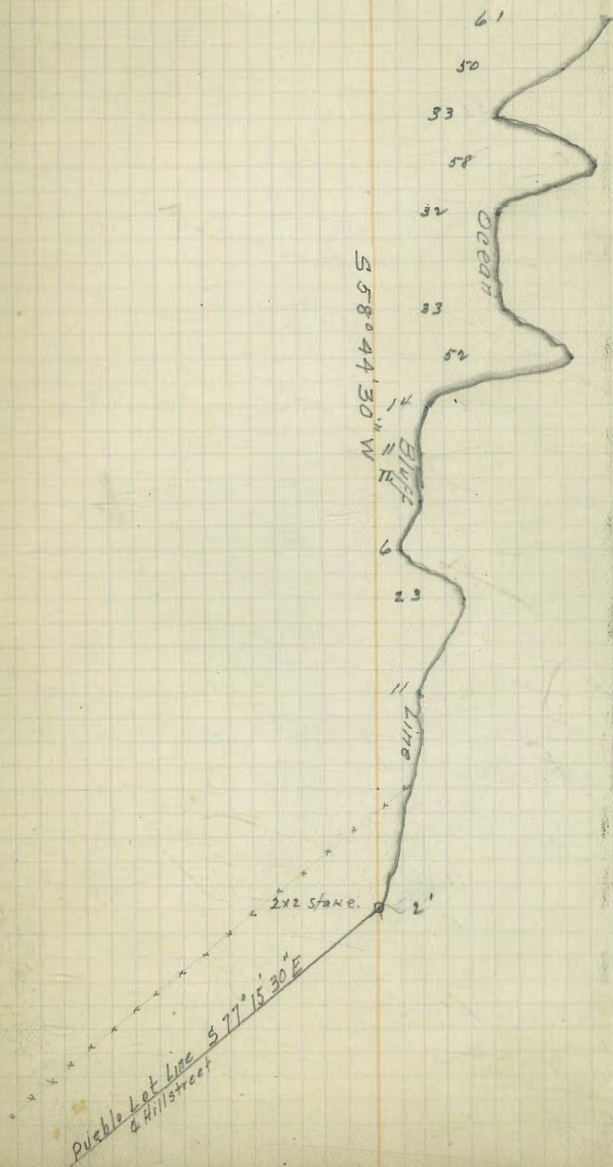
Location Ocean Bluff Line & Hill St = Pueblo Lot Line South to Madame Tingleys Line

- 3+63 Bank to R. 61
- 3+45 " " 50
- 3+10 " " 33
- 2+80 " " 58
- 2+38 " " 32
- 2+04 " " 33
- 1+83 " " 5V
- 1+56 " " 14
- 1+32 " to R 11
- 1+19 Bank to R 11
- 1+1V Bank to R 6.
- 0+90 Bank to R 23.
- 0+60 Bank to R 11.
- 0+47.2 Fence Line

Sta. 0 $\Delta 44^\circ L$ $S 58^\circ 44' 30'' W$

Sta. 0 Put on Pueblo Lot Line foot of Hill St. Bluff Line ocean

Pueblo Lot Line = $S 77^\circ 15' 30'' E$



9+66. Top Bluff 19.

9+25 " " 6' + 4L

8+60. " " 51. + 49

8+37 " " 36

8+32 " " 26

8+22 " " 12

8+08.0 " " 19

7+95.0 " " 40

7+65. " " 52. To Point of Rocks 117.

7+39 " " 22.

7+0.0 " " 16. ✓

6+75.0 Δ 38°00' R. S 01°15'30" E Top Bluff 19 R

6+75. Top Bluff R 18.

6+34 " " " 06.0

6+0.0 " " " 11.

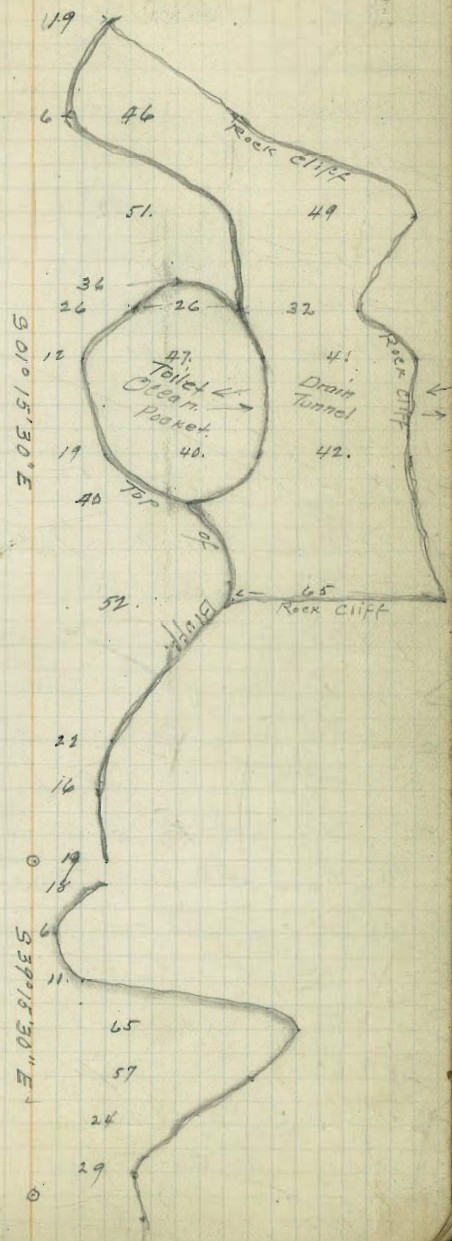
5+47. " " " 65

5+0.0 " " " 57.

4+53 Bluff To R 24

4+0.0 Δ L 98°00' S 39°15'30" E Bluff To R

A Bluff 29' R



Oct 29

16+90 Top Bluff 18'R

16+45 " " 8'R

16+20. " " 12'R

16+0.0 " " 11'R

15+80 " " 14'R

15+45 " " 14'R

15+12. " " 14'R

14+90. " " 10'R

14+35. " " 1'R

14+0.0 " " 3'R

13+45. " " 14'R

13+20. Δ $38^{\circ}00'R$ $S 04^{\circ}44'30"W$ Top Bluff 25'

13+20. Top Bluff to R 22.

13+0.0 Top Bluff to R 21. Bluff + cliff join

12+50 " " + cliff +

12+0.0 " " 32' + cliff

11+45. " " 24' "

11+00 " " 20' "

10+75. Δ $32^{\circ}00'L$ $S 33^{\circ}15'30"E$ Top Bluff to R 9.

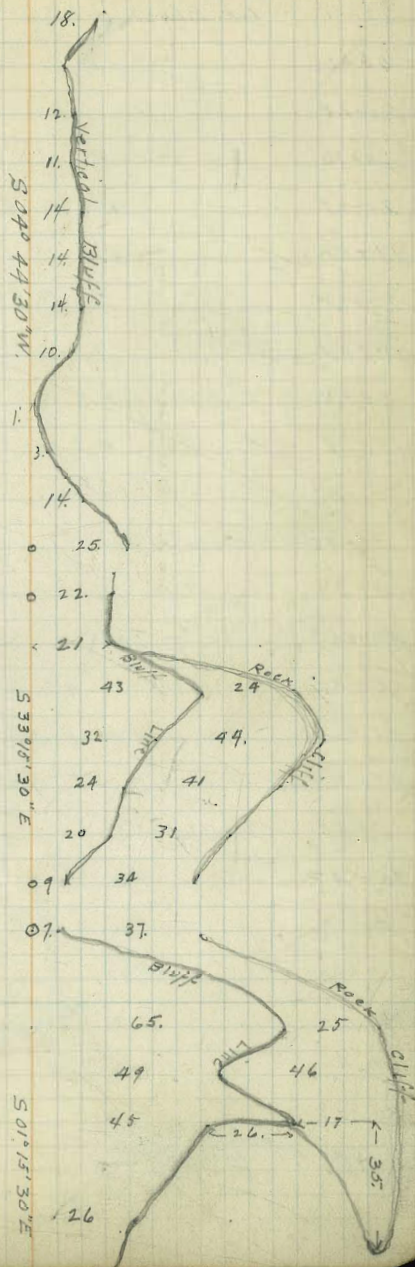
10+75 Top Bluff 7.

10+52. Top Bluff 65

10+00 Top Bluff 49

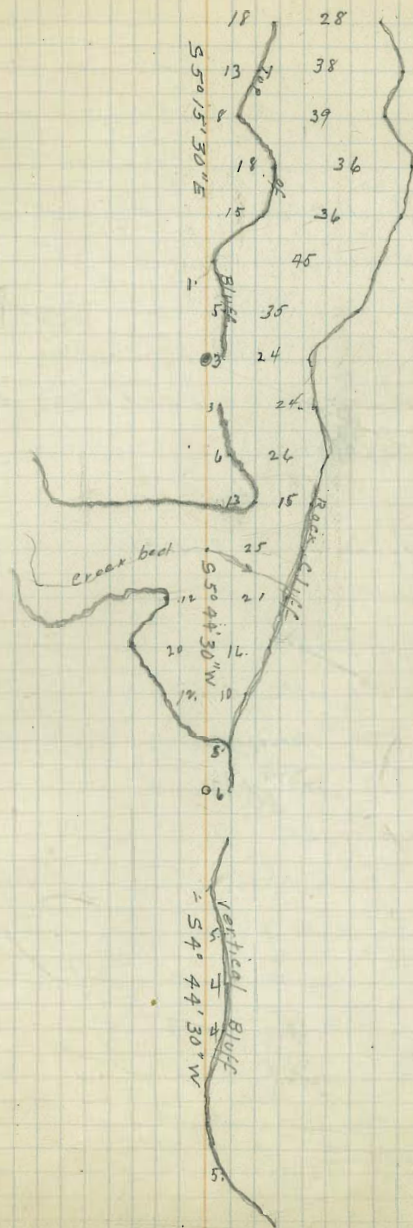
9+95 " " 45

9+83 Top Bluff to R 26'



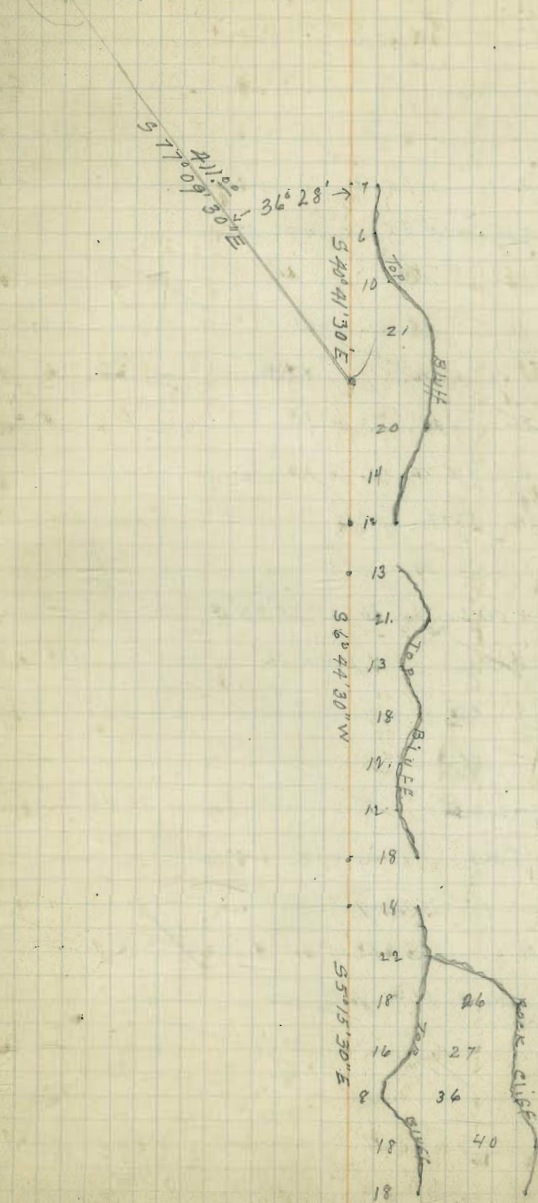
22+11. Top Bluff 18 Cliff 46
 22700 " " 13 " 51
 21+60 " " 8 " 47
 21+16. " " 18 " 54
 21+0.0 " " 15 " 51
 20+54 " " 1. " 45
 20+28 " " 5. " 40
 20+0.0 $\Delta 11^{\circ}00' L$ $S 5^{\circ}15'30'' E$ Top Bluff 5R Cliff 40 R
 20+0.0 Top Bluff To R 3 Cliff R 27
 19+75. Top Bluff To R 6 Cliff R 32
 19+67. " " " 13 " R 28
 19+55. Creek bed inters. " R 25
 19+23. " " " L IV " R 21
 19+08.9 " " 20 L " R 16.
 18+83. Top Bluff 12' L Cliff R 10
 18+69 Top Bluff intersection line + cliff + To R 5.
 18+55. $\Delta 1^{\circ}00' To R$ $S 5^{\circ}44'30'' W$ Top Bluff 6'R
 18+55 Top Bluff 6'R
 18+47. " " 1'R
 18+29. " " 5'R
 18+10. " " 4'R
 18+0.0 " " 4'R
 17+77. " " 0 R
 17+65. " " 0 R
 17+47. " " 5'R

Note
 Creek Location
 See Page 8



26+12.2 = Old Hub marked Sta 11+58. To R 7'
 26+00 Top Bluff. To R 6'
 25+82 " " 10'
 25+62. " " 21'
 25+60. Δ Stadia Line Intersection $57^{\circ}09'30''E$ $\Delta 36^{\circ}28' L$
 25+50. " To R 20'
 25+28. " To R 14'
 25+00 $\Delta 47^{\circ}26' L$ $S 40^{\circ}41'30'' E$ Top Bluff To Riv.
 25+00. Top Bluff
 24+80. " " 21R
 24+60. " " 13R
 24+43. " " 18R
 24+10. " " 12R
 23+75. " " 12R
 23+50. $\Delta 12^{\circ}00' R$ $S 6^{\circ}44'30'' W$. Top Bluff 18R
 23+50. Top Bluff 18 Cliff
 23+26. " " 22'
 23+00 " " 18R " 44R
 22+87. " " 16R " 43R
 22+67 " " 8R " 44R
 22+56 " " 18R " 58R

Point A. Stadia Traverse



1+45. 0

1+45. L Bank 15 Creek 35 R Bank 57

1+40. " 26 " 39 " 64

1+31. " 10 " 39 " 61

1+22. " 8 " 26 " 37

1+15. " 3 " 18 " 34

0+96. " 0 " 16 " 33

0+87. " 0 " 17 " 32

0+78. " 6 " 44 " 51

0+65. Δ 34°00' L. S 55°15'30" E

0+65. L Bank 4 R Bank 56

0+60. R20

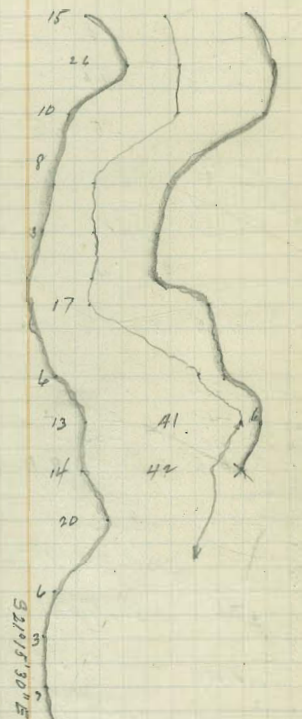
0+55. R6

0+35. Bluff to R3

0+16. Bluff to R3

Sta 0 Δ 26°00' L. S 21°15'30" E. Bluff to R 9

Sta 0 Creek = Sta 18+55.00 Bluff Line



9
 Piedmont Cuts + Fill
 Grades

	Hub El.	North Grades	South Grades	Hub El.	
PC. Rot N Sta. 0+34.88	2743	274.3			
Rot S 0+40.33			272.8	276.6	C 3.87 C 6.2
0+50	F 2.9 269.0	271.9	271.9	277.5	C 5.6
1+00	C 0.9 264.8	263.95	263.95	260.4	F 3.5
1+50	C 3.9 259.9	256.00	256.0	255.9	F 0.3
2+00	C = 5.3 256.0	250.67	250.67	249.1	F 1.6
2+50	C = 6.1 251.4	245.33	245.33	243.4	F 1.9
2+60		244.26	244.26		
3+00	C 7.1 247.4	240.29	240.29	237.8	F 2.5
3+50			236.89		F 2.0
3+50	C 8.6 244.4	235.78	235.78	233.8	F 2.3
3+50 PCVC	C 9.0	233.25	233.25		
4+00	240.5	231.46	231.46	222.4	F 9.1
4+20		229.48	229.48		
4+50	C 6.4	226.16	226.16	227.6	C 4.2
4+60		224.95	224.95		
5+00	C 4.8 224.4	219.64	219.64	224.8	C 5.2
5+40 P.T.C.		213.66	213.66		
5+50	C 5.4 217.3	211.94	211.94	216.8	C 4.9
6+00	C 4.3 208.2	203.85	203.85	207.2	C 3.3
6+50					
6+50	C 3.3 199.1	195.76	195.76	200.3	C 4.5
7+00	C 1.7 189.4	187.68	187.68	193.2	C 5.5
7+50	C 0.4 179.2	179.59	179.59	183.2	C 3.6

Sta.	Cuts	Hub Elev	North Grades	South Grades	Hub El.	Cuts
7+00	C 0.05	1720	1711.5	1711.5	1760	C 4.5
8+00	C 0.0		16653	16653		
8+50	C 0.3	1656	16529	16529	1684	C 3.1
9+00	C 1.8	1609	15908	15908	1622	C 3.4
9+50	C 3.1	1560	15287	15287	1575	C 4.6
9+50	C 4.9	1528	147.94			
10+00				146.28	1510	C 4.7
Cornish Drive						
10+62.25	C 1.4	1437	14198			
11+00	C 1.0	1384	137.44	140.18	1436	C 3.4
11+50	C 1.7	1333	131.55	131.04	1339	C 2.9
12+00	C 2.9	1284	125.98	125.24	1291	C 3.9
12+50	C 5.8	1252	119.48	119.44	1231	C 3.7
12+79.2	C 2.4	1181.9	115.93			
12+10.7			117.00			
1301.03				113.66	116.4	C 2.7
1303.74				113.66		

Note
 grade change Sta. 3+00 to Sta. 8+0.0
 Corrections made Aug 14-27.

Hill St RIVIERA

VILLAS

10

Hill St.

	N. Hub.	N. Grades	S. Grades	S. Hub.
ALEXANDRA		276.5		
14+03.26				
14+25.26 PC	C 1.6	276.4	274.80	
14+50	C 3.0	276.0	273.04	
14+80 BVC			270.86	
15+00	C 5.3	274.6	269.27	
15+20 MVC			267.46	
15+50	C 10.7	274.9	264.22	
15+60 EVC			263.00	
15+75			261.12	
16+00	F 0.5	253.4	258.00	
16+50	F 0.5	251	251.75	
16+60 BVC			250.50	
17+00 MVC	C 1.7	247.4	245.69	
17+40 EVC			241.27	
17+50	C 1.3	241.5	240.25	
18+00	F 0.5	235.5	235.00	
18+50	F 0.3	229.4	229.75	
19+00	F 1.5	223.0	224.50	
19+50	R 0.1	219.1	219.25	
20+00	C 8.0	222.0	214.00	
20+50	C 4.8	214.0	208.75	
20+60 BVC			207.73	
21+00 MVC	C 2.3	205.1	202.75	
21+40 EVC			196.29	
21+50	C 2.0	196.1	194.49	
22+00	F 0.3	185.2	185.48	

7.82%
12.5%
10.25%
16.0%

See Book 11. page 57
For curb grades Box 11 Page 44

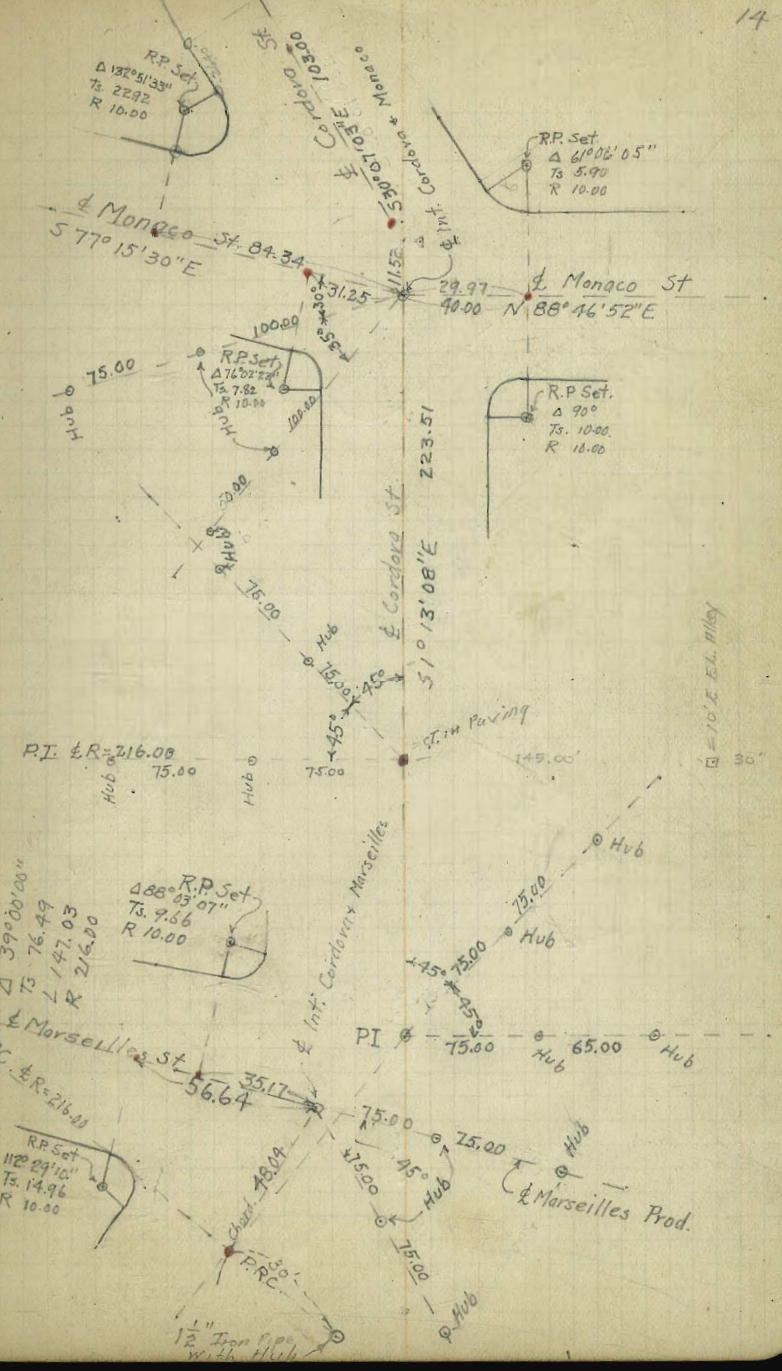
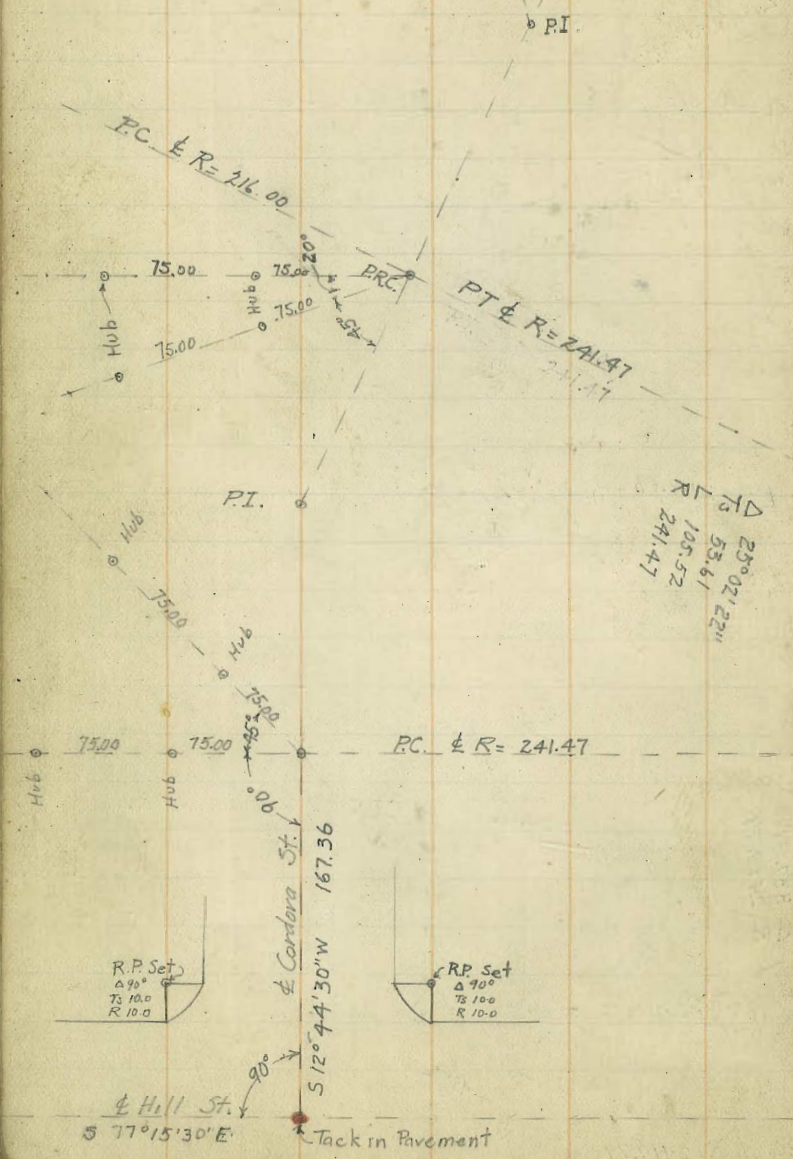
RIVIERA

VILLAS

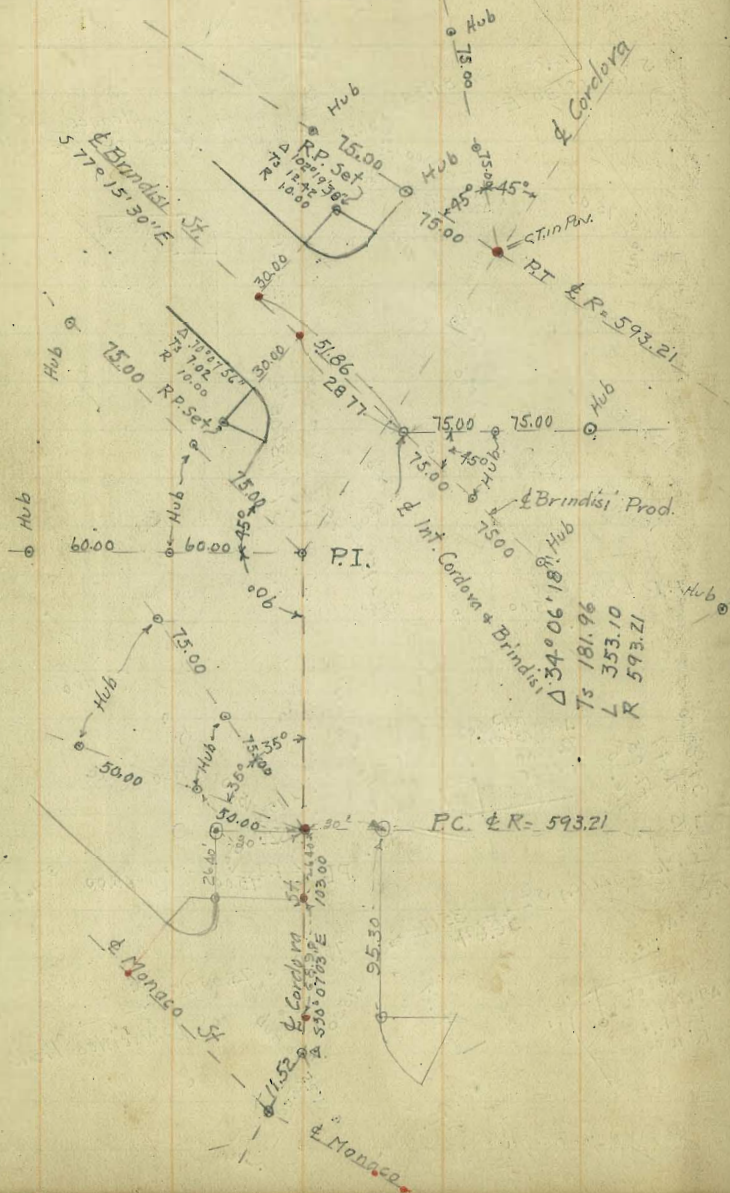
Sta	Cut	Hub.	North Grades	South Grades	Hub.	Cut.
22+50	F 0.5	1760	176.47			
23+00	C 0.5	1679	167.46			
23+50	C 1.0	1595	158.46			
24+00	C 1.5	1510	149.45			
24+25.26	C 1.1	1460	144.90			
CORNISH DRIVE						
24+52.43						

Note. South Side of Road to be graded to point 18' south of E of Hill

Reference Points
& Cordova St.



Reference Points
& Cordova St.



PC. $\Delta R = 2054.79$
PT. $\Delta R = 715.58$

$\Delta 93^\circ 1' 20''$
Ts. 59.60
L. 118.93
R. 715.58

$\Delta 99^\circ 37' 56''$
Ts. 11.84
R. 10.00

PC. $\Delta R = 715.58$

$\Delta 577^\circ 15' 30'' E$

$\Delta 81^\circ 14' 45''$
Ts. 8.58
R. 10.00

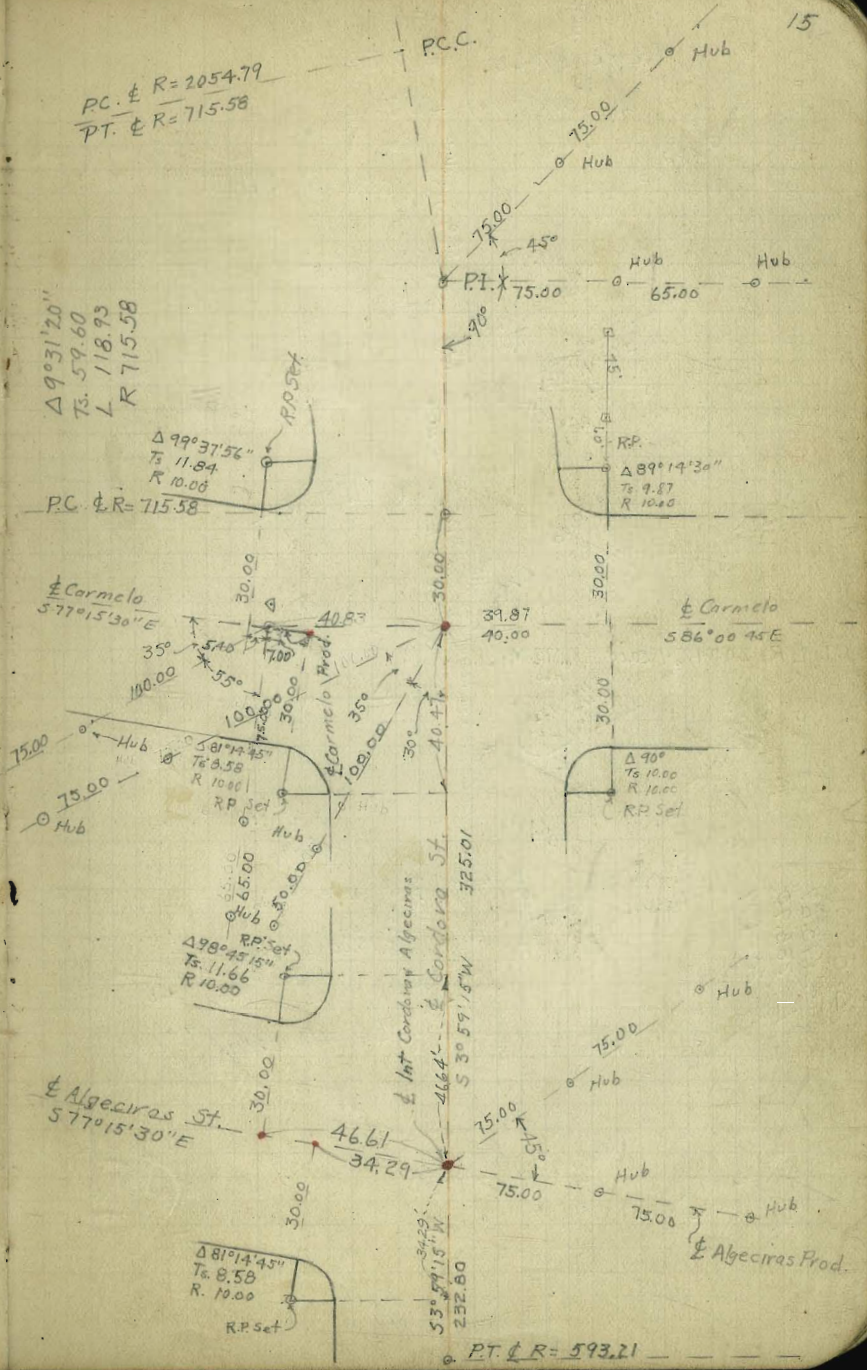
$\Delta 98^\circ 45' 15''$
Ts. 11.66
R. 10.00

$\Delta 577^\circ 15' 30'' E$

$\Delta 81^\circ 14' 45''$
Ts. 8.58
R. 10.00

P.C.

15



$\Delta 93^\circ 1' 20''$
Ts. 59.60
L. 118.93
R. 715.58

$\Delta 99^\circ 37' 56''$
Ts. 11.84
R. 10.00

PC. $\Delta R = 715.58$

$\Delta 577^\circ 15' 30'' E$

$\Delta 81^\circ 14' 45''$
Ts. 8.58
R. 10.00

$\Delta 98^\circ 45' 15''$
Ts. 11.66
R. 10.00

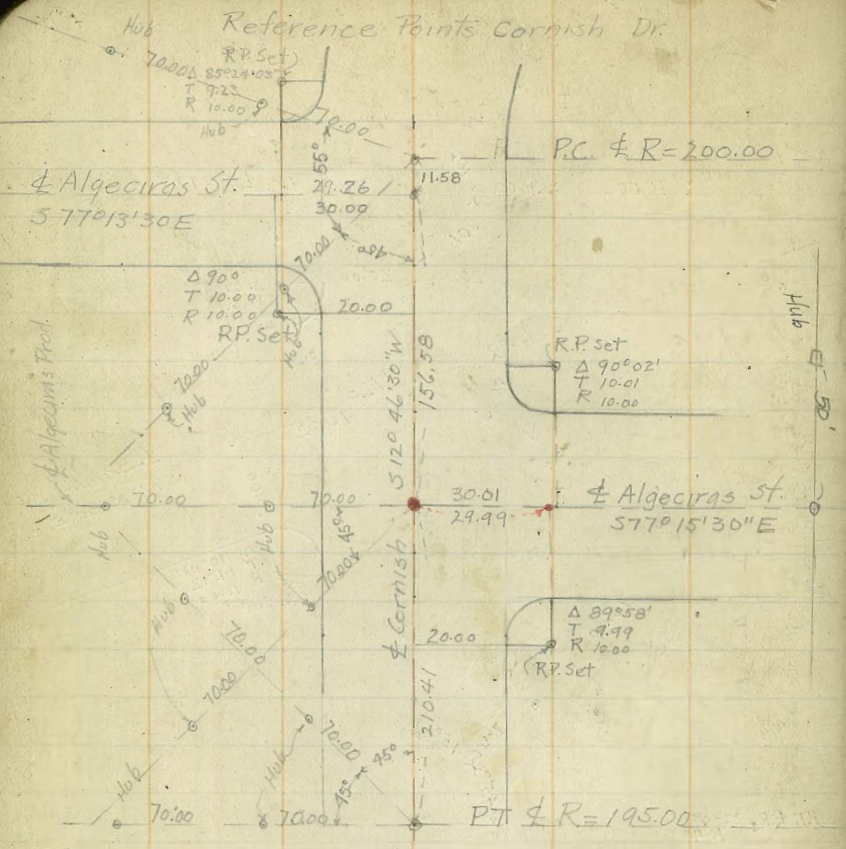
$\Delta 577^\circ 15' 30'' E$

$\Delta 81^\circ 14' 45''$
Ts. 8.58
R. 10.00

P.C.

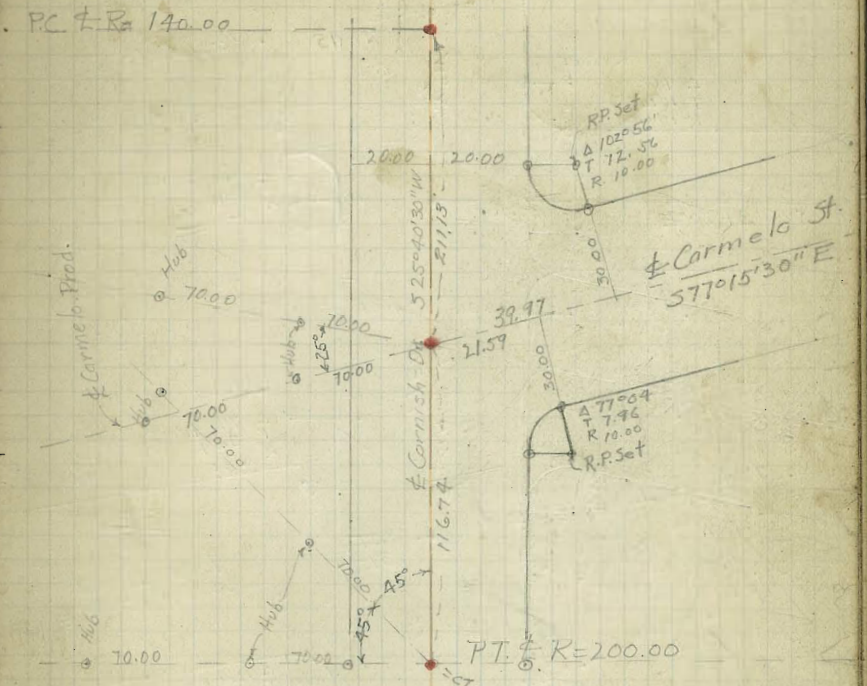
15

PT. $\Delta R = 593.21$



Δ	T	R
120°10'	34.68	195.00
68°64'	68.64	195.00

P.C. & R = 195.00



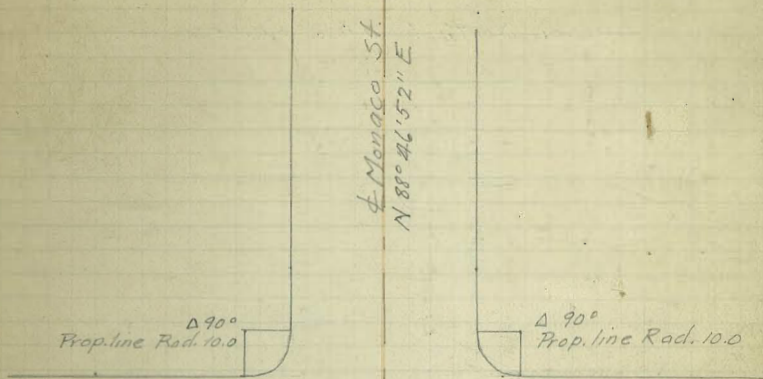
Δ	T	R
12°54'	22.61	200.00
45°03'	45.03	200.00

P.C. & R = 200.00

4-19-27

Azure Vista

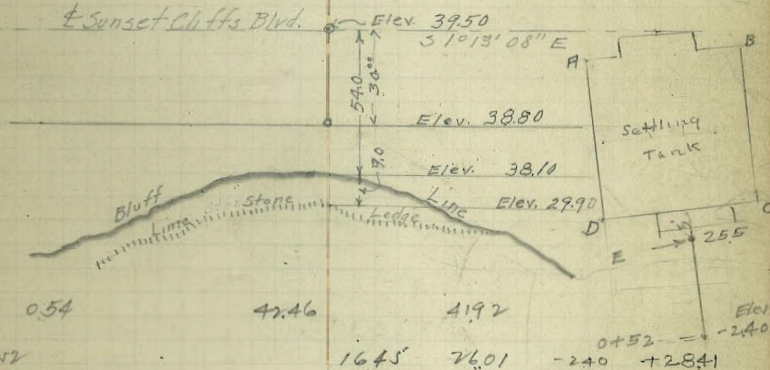
Monaco St. Storm Drain Location
 from E. Int. Sunset Cliffs Blvd.
 Monaco St. to Bluff line on E.
 Monaco St. Produced.



Settling Tank Sunset Cliffs Blvd + Monaco St.

	2.63	44.55	Elev. Stub. 4192	Elev. Grades Page 33	
A		4.47	40.13	34.00	+6.13
B		4.09	40.46	34.00	+6.46
C		5.19	39.86	34.00	+5.86
D		5.30	39.25	34.00	+5.25
	0.85	42.77	4192 = 314 Sunset		
A		4.78	37.99	34.00	+3.99
B		4.82	37.95	34.00	+3.95
C		5.00	37.17	34.00	+3.17
D		5.40	37.01	34.00	+3.01
E = Flow line		4.36	38.41	25.5	+2.91
+74 = End of out Fall Rate Ref.					-14.0

E. Sunset Cliffs Blvd.



Monaco	0.54	42.46	4192	
				16.45
				76.01
				-240
				+28.41

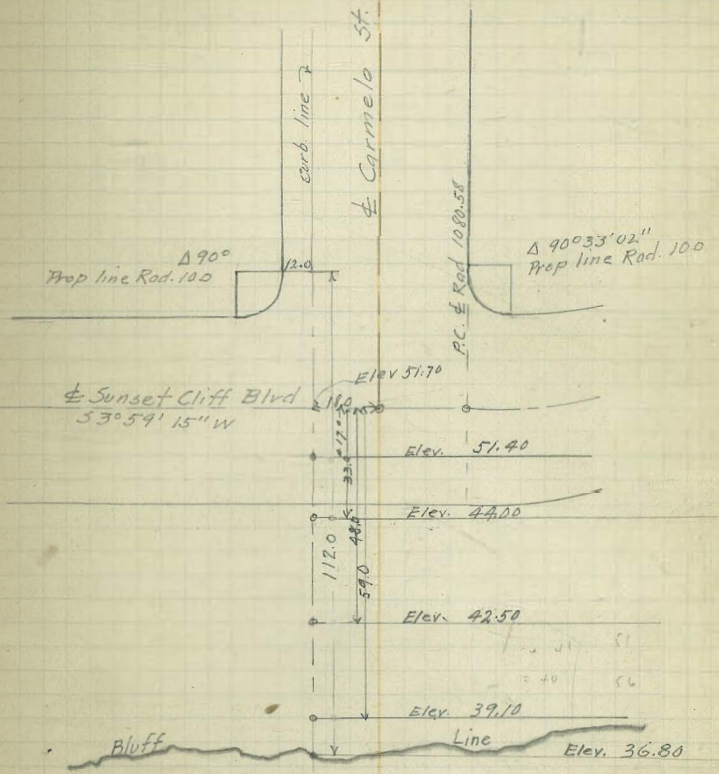
4-19-27

Azure Vista

Carmelo St Storm Drain Location
from P.C. of Ret. Carmelo St. to Bluff
line on North Curbline Carmelo St.

57

22



GRADES ON CORNISH DRIVE.
From Hill St South.

E.L. Sta.	E.L. Grades	W.L. Sta.	W.L. Grades
cb. P.C. on Hill St		cb. P.C. on Hill St	
ctr. of curve on	143.97	ctr. of curve	135.72
cb. line	147.18	on cb. line	137.86
cb. E.C. on Cornish = 0+00	141.00	cb. E.C. on Cornish Dr. = 0+00	140.00
+52.5	141.87		140.87
1+05	142.75		141.75
+57.5	143.62		142.62
N.W. 1/4 of			
2+09.99 = Bk.	144.50		143.50
(1-15-2-1161)			
2+14.99 = Bk.	144.50		143.50
(3-30-67)			
2+61.66	143.84		142.84
+98.33	143.17		142.17
opp. P.C. on		on Cornish Dr.	
West	142.50	cb. P.C. =	141.50
3+85		ctr. curve	
(2-20)		on cb. line	139.59
3+75 - 6 Mars.	141.75	cb. E.C. on	
opp. P.C. on West		Murrell's	
= 0+00	141.00	on North	137.68
		Murrell's	
		on South	138.68
		cb. P.C.	
		ctr. curve	139.34
		on cb. line	
		cb. E.C. on Cornish	
		= 0+00	140.00

see page 26

CORNISH DRIVE Cont.

E.L. Sta	E.L. Grades	Y.L. Sta	Y.L. Grades
cb PC on South	150.00	cb PC on south	146.50
Hpeciras	148.04	Hpeciras st	147.63
cb line diff 27'	147.16	ctr. Curve on cb line	148.39
S.E. Cor Hpeciras	146.77	0+00	148.75
cb PRC = 0+00	146.77	cb E.C. on Cornish	149.00
157.5' = cb of 3' from ch.			
diff 2° 04' 30" = 0	146.37	+36.67	148.08
4° 09' = 0 = E.C.	145.99	+73.34	147.16
(2-41.3)	145.00	149.99 = N.W. Hilly	146.25
0+73.17			
1+10.46 B.K.	144.00	1416.57 = PC. No Sta here	
(2-41.04)		0 10.88 = ch 10' at 11.99 = 3' from ch. 145.80	
1+55.5	142.90	1° 50' 06" = ch 6' date of survey 145.43	
1+96.54 = B.K.	141.80	(2012' 27") 1487' = " 3' from ch.	
(2-43.9)		0 4° 08' 33" = " 2' from 6' south to ch.	
2+40.44	140.64	1+57.11 1467' = 3' from ch.	
184.34 = N.W. Hilly	139.27	0 6° 27' = E.C.	145.07
(1-15.32)		(2-41.29)	
2+99.66 = S.W. Hilly out	139.06	1498.40	144.03
2-30		N.W. Cor Carmelo	
3+79.66	138.27	0 2° 39' = cb PC. on Cornish	143.00
+59.66 = R. 2° 05' 14"	137.48	ctr. Curve on cb line	142.55
0 2° 54' 24" 12.4' chds 3' from ch.	137.16	cb E.C. on N.W. Cor Carmelo	141.62
0 5° 49' 48"	136.84	140.27	139.33
0 8° 43' 12"	136.52	cb PC. on S.W. Cor Carmelo	138.13
4+05.34		ctr. Curve on cb line	
0 11° 07' 30" = E.C.	136.20	cb E.C. = 0+00	140.80
(1-77.9)		3-36.85	
4+16.09 = B.K.	136.00	0+36.85	139.90
3-39.96		+73.70	138.99
4+36.25	135.50	1+10.56 = N.W. Hilly	138.08
4+96.06 = B.K.	135.00	(1-15.39)	
(1-14.01) ch. R. N.E. Cor Casitas	134.77	1425.95 = S.W. Hilly	137.70
5+10.65 = B.K.		(1-57.14)	
ctr. of Curve	138.11	1413.09 = PC. 2° 39' 14"	136.79
cb E.C. = N.E. Cor	137.00	0 2° 54' 24" 1877' = ch of 3' from ch.	136.39
cb PC. on S.E. Cor Casitas	137.00	0 5° 48' 48"	135.99
		0 8° 43' 12"	135.59

152.57 = 7 from Page 87
 015+
 152.77 = 7
 016-
 152.77 = 7

Sta	Grade	Sta	Grade
152.57 = TP	150.05	151.60	146.27
152.77 = T	149.76	151.86	146.05
152.77 = T	149.76	152.12	145.83
152.77 = T	149.76	152.38	145.61
152.77 = T	149.76	152.64	145.39
152.77 = T	149.76	152.90	145.17
152.77 = T	149.76	153.16	144.95
152.77 = T	149.76	153.42	144.73
152.77 = T	149.76	153.68	144.51
152.77 = T	149.76	153.94	144.29
152.77 = T	149.76	154.20	144.07
152.77 = T	149.76	154.46	143.85
152.77 = T	149.76	154.72	143.63
152.77 = T	149.76	154.98	143.41
152.77 = T	149.76	155.24	143.19
152.77 = T	149.76	155.50	142.97
152.77 = T	149.76	155.76	142.75
152.77 = T	149.76	156.02	142.53
152.77 = T	149.76	156.28	142.31
152.77 = T	149.76	156.54	142.09
152.77 = T	149.76	156.80	141.87
152.77 = T	149.76	157.06	141.65
152.77 = T	149.76	157.32	141.43
152.77 = T	149.76	157.58	141.21
152.77 = T	149.76	157.84	140.99
152.77 = T	149.76	158.10	140.77
152.77 = T	149.76	158.36	140.55
152.77 = T	149.76	158.62	140.33
152.77 = T	149.76	158.88	140.11
152.77 = T	149.76	159.14	139.89
152.77 = T	149.76	159.40	139.67
152.77 = T	149.76	159.66	139.45
152.77 = T	149.76	159.92	139.23
152.77 = T	149.76	160.18	139.01
152.77 = T	149.76	160.44	138.79
152.77 = T	149.76	160.70	138.57
152.77 = T	149.76	160.96	138.35
152.77 = T	149.76	161.22	138.13
152.77 = T	149.76	161.48	137.91
152.77 = T	149.76	161.74	137.69
152.77 = T	149.76	162.00	137.47
152.77 = T	149.76	162.26	137.25
152.77 = T	149.76	162.52	137.03
152.77 = T	149.76	162.78	136.81
152.77 = T	149.76	163.04	136.59
152.77 = T	149.76	163.30	136.37
152.77 = T	149.76	163.56	136.15
152.77 = T	149.76	163.82	135.93
152.77 = T	149.76	164.08	135.71
152.77 = T	149.76	164.34	135.49
152.77 = T	149.76	164.60	135.27
152.77 = T	149.76	164.86	135.05
152.77 = T	149.76	165.12	134.83
152.77 = T	149.76	165.38	134.61
152.77 = T	149.76	165.64	134.39
152.77 = T	149.76	165.90	134.17
152.77 = T	149.76	166.16	133.95
152.77 = T	149.76	166.42	133.73
152.77 = T	149.76	166.68	133.51
152.77 = T	149.76	166.94	133.29
152.77 = T	149.76	167.20	133.07
152.77 = T	149.76	167.46	132.85
152.77 = T	149.76	167.72	132.63
152.77 = T	149.76	167.98	132.41
152.77 = T	149.76	168.24	132.19
152.77 = T	149.76	168.50	131.97
152.77 = T	149.76	168.76	131.75
152.77 = T	149.76	169.02	131.53
152.77 = T	149.76	169.28	131.31
152.77 = T	149.76	169.54	131.09
152.77 = T	149.76	169.80	130.87
152.77 = T	149.76	170.06	130.65
152.77 = T	149.76	170.32	130.43
152.77 = T	149.76	170.58	130.21
152.77 = T	149.76	170.84	129.99
152.77 = T	149.76	171.10	129.77
152.77 = T	149.76	171.36	129.55
152.77 = T	149.76	171.62	129.33
152.77 = T	149.76	171.88	129.11
152.77 = T	149.76	172.14	128.89
152.77 = T	149.76	172.40	128.67
152.77 = T	149.76	172.66	128.45
152.77 = T	149.76	172.92	128.23
152.77 = T	149.76	173.18	128.01
152.77 = T	149.76	173.44	127.79
152.77 = T	149.76	173.70	127.57
152.77 = T	149.76	173.96	127.35
152.77 = T	149.76	174.22	127.13
152.77 = T	149.76	174.48	126.91
152.77 = T	149.76	174.74	126.69
152.77 = T	149.76	175.00	126.47
152.77 = T	149.76	175.26	126.25
152.77 = T	149.76	175.52	126.03
152.77 = T	149.76	175.78	125.81
152.77 = T	149.76	176.04	125.59
152.77 = T	149.76	176.30	125.37
152.77 = T	149.76	176.56	125.15
152.77 = T	149.76	176.82	124.93
152.77 = T	149.76	177.08	124.71
152.77 = T	149.76	177.34	124.49
152.77 = T	149.76	177.60	124.27
152.77 = T	149.76	177.86	124.05
152.77 = T	149.76	178.12	123.83
152.77 = T	149.76	178.38	123.61
152.77 = T	149.76	178.64	123.39
152.77 = T	149.76	178.90	123.17
152.77 = T	149.76	179.16	122.95
152.77 = T	149.76	179.42	122.73
152.77 = T	149.76	179.68	122.51
152.77 = T	149.76	179.94	122.29
152.77 = T	149.76	180.20	122.07
152.77 = T	149.76	180.46	121.85
152.77 = T	149.76	180.72	121.63
152.77 = T	149.76	180.98	121.41
152.77 = T	149.76	181.24	121.19
152.77 = T	149.76	181.50	120.97
152.77 = T	149.76	181.76	120.75
152.77 = T	149.76	182.02	120.53
152.77 = T	149.76	182.28	120.31
152.77 = T	149.76	182.54	120.09
152.77 = T	149.76	182.80	119.87
152.77 = T	149.76	183.06	119.65
152.77 = T	149.76	183.32	119.43
152.77 = T	149.76	183.58	119.21
152.77 = T	149.76	183.84	118.99
152.77 = T	149.76	184.10	118.77
152.77 = T	149.76	184.36	118.55
152.77 = T	149.76	184.62	118.33
152.77 = T	149.76	184.88	118.11
152.77 = T	149.76	185.14	117.89
152.77 = T	149.76	185.40	117.67
152.77 = T	149.76	185.66	117.45
152.77 = T	149.76	185.92	117.23
152.77 = T	149.76	186.18	117.01
152.77 = T	149.76	186.44	116.79
152.77 = T	149.76	186.70	116.57
152.77 = T	149.76	186.96	116.35
152.77 = T	149.76	187.22	116.13
152.77 = T	149.76	187.48	115.91
152.77 = T	149.76	187.74	115.69
152.77 = T	149.76	188.00	115.47
152.77 = T	149.76	188.26	115.25
152.77 = T	149.76	188.52	115.03
152.77 = T	149.76	188.78	114.81
152.77 = T	149.76	189.04	114.59
152.77 = T	149.76	189.30	114.37
152.77 = T	149.76	189.56	114.15
152.77 = T	149.76	189.82	113.93
152.77 = T	149.76	190.08	113.71
152.77 = T	149.76	190.34	113.49
152.77 = T	149.76	190.60	113.27
152.77 = T	149.76	190.86	113.05
152.77 = T	149.76	191.12	112.83
152.77 = T	149.76	191.38	112.61
152.77 = T	149.76	191.64	112.39
152.77 = T	149.76	191.90	112.17
152.77 = T	149.76	192.16	111.95
152.77 = T	149.76	192.42	111.73
152.77 = T	149.76	192.68	111.51
152.77 = T	149.76	192.94	111.29
152.77 = T	149.76	193.20	111.07
152.77 = T	149.76	193.46	110.85
152.77 = T	149.76	193.72	110.63
152.77 = T	149.76	193.98	110.41
152.77 = T	149.76	194.24	110.19
152.77 = T	149.76	194.50	109.97
152.77 = T	149.76	194.76	109.75
152.77 = T	149.76	195.02	109.53
152.77 = T	149.76	195.28	109.31
152.77 = T	149.76	195.54	109.09
152.77 = T	149.76	195.80	108.87
152.77 = T	149.76	196.06	108.65
152.77 = T	149.76	196.32	108.43
152.77 = T	149.76</		

ALGECIRAS ST.

GRADING

From E.W. AZURE YINTU to Cordova St.

S.L. Sta.	S.L. Grade	N.W. Sta.	N.W. Grade
(3-55) 0400	170.00		170.00
+55	160.00		160.00
cb. PC. on ALGECIRAS			
+140 S.E. Cor.	150.00		150.00
PC. on ALGECIRAS			
= 0+100 = S.W. Cor. Cornish	146.56	0+400 = cb. PC.	147.06
5-44.7			
0+44.7	140.10		140.60
+89.4			
1+34.10	133.64		134.14
+78.8			
2+23.5 = Bkt.	127.18		127.68
(4-20) -			
+43.5 = "	120.72		121.22
+63.5 = "	114.26	Bkt.	114.76
+83.5 = "	111.47	"	111.97
3+03.5 = "	108.85	"	109.35
(6-46.36)			
3+49.86	106.42	"	106.92
+96.22			
4+42.58	104.16	3+03.5 = Bkt.	104.66
+88.94		(6-48.42)	
5+35.30	99.10	3+51.72	99.39
+81.65 S.E. Cor. Cordova			
= cb. PC. on ALGECIRAS	94.05	4+00.34	94.12
ct. Curve	89.00	+48.76	88.84
cb. EC. on Cordova	83.95	+97.18	83.56
	78.90	5+45.6	78.28
	73.85	N.E. Cor. Cordova	
		= cb. PC. on ALGECIRAS	73.00
	73.42	ct. Curve	72.50
	73.00	cb. EC. on Cordova.	72.00

157.45 = N.E. B.M. Cornish + Algeciras

Sta.	Grade	Sta.	Grade
131.54		170.00	
170.26-TP		150.00	
157.45 = B.M. Cornish		146.68	
157.45		140.22	
157.45		133.76	
157.45		127.30	
157.45		120.84	
157.45		114.38	
157.45		107.92	
157.45		101.46	
157.45		95.00	
157.45		88.54	
157.45		82.08	
157.45		75.62	
157.45		69.16	
157.45		62.70	
157.45		56.24	
157.45		49.78	
157.45		43.32	
157.45		36.86	
157.45		30.40	
157.45		23.94	
157.45		17.48	
157.45		11.02	
157.45		4.56	
157.45		-1.90	
157.45		-8.44	
157.45		-14.98	
157.45		-21.52	
157.45		-28.06	
157.45		-34.60	
157.45		-41.14	
157.45		-47.68	
157.45		-54.22	
157.45		-60.76	
157.45		-67.30	
157.45		-73.84	
157.45		-80.38	
157.45		-86.92	
157.45		-93.46	
157.45		-100.00	
157.45		-106.54	
157.45		-113.08	
157.45		-119.62	
157.45		-126.16	
157.45		-132.70	
157.45		-139.24	
157.45		-145.78	
157.45		-152.32	
157.45		-158.86	
157.45		-165.40	
157.45		-171.94	
157.45		-178.48	
157.45		-185.02	
157.45		-191.56	
157.45		-198.10	
157.45		-204.64	
157.45		-211.18	
157.45		-217.72	
157.45		-224.26	
157.45		-230.80	
157.45		-237.34	
157.45		-243.88	
157.45		-250.42	
157.45		-256.96	
157.45		-263.50	
157.45		-270.04	
157.45		-276.58	
157.45		-283.12	
157.45		-289.66	
157.45		-296.20	
157.45		-302.74	
157.45		-309.28	
157.45		-315.82	
157.45		-322.36	
157.45		-328.90	
157.45		-335.44	
157.45		-341.98	
157.45		-348.52	
157.45		-355.06	
157.45		-361.60	
157.45		-368.14	
157.45		-374.68	
157.45		-381.22	
157.45		-387.76	
157.45		-394.30	
157.45		-400.84	
157.45		-407.38	
157.45		-413.92	
157.45		-420.46	
157.45		-427.00	
157.45		-433.54	
157.45		-440.08	
157.45		-446.62	
157.45		-453.16	
157.45		-459.70	
157.45		-466.24	
157.45		-472.78	
157.45		-479.32	
157.45		-485.86	
157.45		-492.40	
157.45		-498.94	
157.45		-505.48	
157.45		-512.02	
157.45		-518.56	
157.45		-525.10	
157.45		-531.64	
157.45		-538.18	
157.45		-544.72	
157.45		-551.26	
157.45		-557.80	
157.45		-564.34	
157.45		-570.88	
157.45		-577.42	
157.45		-583.96	
157.45		-590.50	
157.45		-597.04	
157.45		-603.58	
157.45		-610.12	
157.45		-616.66	
157.45		-623.20	
157.45		-629.74	
157.45		-636.28	
157.45		-642.82	
157.45		-649.36	
157.45		-655.90	
157.45		-662.44	
157.45		-668.98	
157.45		-675.52	
157.45		-682.06	
157.45		-688.60	
157.45		-695.14	
157.45		-701.68	
157.45		-708.22	
157.45		-714.76	
157.45		-721.30	
157.45		-727.84	
157.45		-734.38	
157.45		-740.92	
157.45		-747.46	
157.45		-754.00	
157.45		-760.54	
157.45		-767.08	
157.45		-773.62	
157.45		-780.16	
157.45		-786.70	
157.45		-793.24	
157.45		-799.78	
157.45		-806.32	
157.45		-812.86	
157.45		-819.40	
157.45		-825.94	
157.45		-832.48	
157.45		-839.02	
157.45		-845.56	
157.45		-852.10	
157.45		-858.64	
157.45		-865.18	
157.45		-871.72	
157.45		-878.26	
157.45		-884.80	
157.45		-891.34	
157.45		-897.88	
157.45		-904.42	
157.45		-910.96	
157.45		-917.50	
157.45		-924.04	
157.45		-930.58	
157.45		-937.12	
157.45		-943.66	
157.45		-950.20	
157.45		-956.74	
157.45		-963.28	
157.45		-969.82	
157.45		-976.36	
157.45		-982.90	
157.45		-989.44	
157.45		-995.98	
157.45		-1002.52	
157.45		-1009.06	
157.45		-1015.60	
157.45		-1022.14	
157.45		-1028.68	
157.45		-1035.22	
157.45		-1041.76	
157.45		-1048.30	
157.45		-1054.84	
157.45		-1061.38	
157.45		-1067.92	
157.45		-1074.46	
157.45		-1081.00	
157.45		-1087.54	
157.45		-1094.08	
157.45		-1100.62	
157.45		-1107.16	
157.45		-1113.70	
157.45		-1120.24	
157.45		-1126.78	
157.45		-1133.32	
157.45		-1139.86	
157.45		-1146.40	
157.45		-1152.94	
157.45		-1159.48	
157.45		-1166.02	
157.45		-1172.56	
157.45		-1179.10	
157.45		-1185.64	
157.45		-1192.18	
157.45		-1198.72	
157.45		-1205.26	
157.45		-1211.80	
157.45		-1218.34	
157.45		-1224.88	
157.45		-1231.42	
157.45		-1237.96	
157.45		-1244.50	
157.45		-1251.04	
157.45		-1257.58	
157.45		-1264.12	
157.45		-1270.66	
157.45		-1277.20	
157.45		-1283.74	
157.45		-1290.28	
157.45		-1296.82	
157.45		-1303.36	
157.45		-1309.90	
157.45		-1316.44	
157.45		-1322.98	
157.45		-1329.52	
157.45		-1336.06	
157.45		-1342.60	
157.45		-1349.14	
157.45		-1355.68	
157.45		-1362.22	
157.45		-1368.76	
157.45		-1375.30	
157.45		-1381.84	
157.45		-1388.38	
157.45		-1394.92	
157.45		-1401.46	
157.45		-1408.00	
157.45		-1414.54	
157.45		-1421.08	
157.45		-1427.62	
157.45		-1434.16	
157.45		-1440.70	
157.45		-1447.24	
157.45		-1453.78	
157.45		-1460.32	
157.45		-1466.86	
157.45		-1473.40	
157.45		-1479.94	
157.45		-1486.48	
157.45		-1493.02	
157.45		-1499.56	
157.45		-1506.10	
157.45			

CORDOVA ST.
- GRADING
From Hill to Ludera St.

E.L. Station	E.L. Grade	N.L. Sta.	N.L. Grade
5 E. Cor. Cordova			
6 P.C. on Hill	63.17	6 P.C. on Hill St.	57.94
To Curve 0+00	62.58	To Curve 0+00	
6 E.C. on Cordova 3-36.67	62.00	6 E.C. on Cordova	60.50
+36.67	62.39	0+49.45 Note changed on banner opp. Page	61.00
+73.34	62.78	+84.9	61.50
1+10 = N.H. Alley	63.18	1+27.36 = P.C. Pt. 22° 29' 10"	64.01
+25 = S.H. Alley	63.34	138 chd 10' off st 1442 " 3' 3/4" chd	62.18
1+27.36 = P.C. Pt. 22° 29' 10"	63.37	3044 54"	62.35
1716 " 3' 3/4" chd	63.55	5037' 18"	62.51
3044' 54"	63.74	7021' 44"	62.67
5037' 18"	63.93	9022' 10"	62.83
7021' 44"	64.12	11014' 35"	63.00
9022' 10"	64.31	12031' 11"	63.09
11014' 35"	64.50	13053' 11"	63.31
		5046' 74"	63.54
		8039' 33"	63.77
6 P.C. S.E. Cor. Manselites		11033' 44"	64.00
on Cordova = 0+00 = opp. side on York	65.00	12031' 11"	64.18
1678 = chd 10' off st		14011' 49"	64.36
1804 " 3' 3/4" chd	65.15	16050' 54"	64.53
5018' 10"	65.30	19030' 00"	64.77
0+51.64 = E.C. 7° 57' 15"	65.46		65.00
(3-30.47)			65.00
0+82.11	65.73		64.64
1+12.59 = N.H. Alley	66.00		
(1-15.46)			
1+28.05 = S.H. Alley	66.00		
(3-28.61)			
1+66.66	65.66		

62.96 = 5 M. N.E. Cor. Cordova & Hill on E.C. of 6 Return, top of 6.

493 -
6785-T
330 -
6455 = TP
960 -
7215-T

EL 6214 6253 6292 6332 6371 6411 6451 6491 6531 6571 6611 6651 6691 6731 6771 6811 6851 6891 6931 6971 7011 7051 7091 7131 7171 7211 7251 7291 7331 7371 7411 7451 7491 7531 7571 7611 7651 7691 7731 7771 7811 7851 7891 7931 7971 8011 8051 8091 8131 8171 8211 8251 8291 8331 8371 8411 8451 8491 8531 8571 8611 8651 8691 8731 8771 8811 8851 8891 8931 8971 9011 9051 9091 9131 9171 9211 9251 9291 9331 9371 9411 9451 9491 9531 9571 9611 9651 9691 9731 9771 9811 9851 9891 9931 9971 10011 10051 10091 10131 10171 10211 10251 10291 10331 10371 10411 10451 10491 10531 10571 10611 10651 10691 10731 10771 10811 10851 10891 10931 10971 11011 11051 11091 11131 11171 11211 11251 11291 11331 11371 11411 11451 11491 11531 11571 11611 11651 11691 11731 11771 11811 11851 11891 11931 11971 12011 12051 12091 12131 12171 12211 12251 12291 12331 12371 12411 12451 12491 12531 12571 12611 12651 12691 12731 12771 12811 12851 12891 12931 12971 13011 13051 13091 13131 13171 13211 13251 13291 13331 13371 13411 13451 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73251 73291 73331 73371 73411 73451 73491 73531 73571 73611 73651 73691 73731 73771 73811 73851 73891 73931 73971 74011 74051 74091 74131 74171 74211 74251 74291 74331 74371 74411 74451 74491 74531 74571 74611 74651 74691 74731 74771 74811 74851 74891 74931 74971 75011 75051 75091 75131 75171 75211 75251 75291 75331 75371 75411 75451 75491 75531 75571 75611 75651 75691 75731 75771 75811 75851 75891 75931 75971 76011 76051 76091 76131 76171 76211 76251 76291 76331 76371 76411 76451 76491 76531 76571 76611 76651 76691 76731

CARDOVA ST.
Cont

E.L. Sta.	E.L. Grade	N.L. Sta.	N.L. Grade
2+05.27 N.E. Cor. Monaco	65.33	2+16.10 N.W. Cor. Monaco	64.29
2+43.88 = cb.P.C. on Cardova	65.00	2+51.80 = cb.P.C. on Cardova	63.94
SE. Cor. Monaco = 0+00 - cb.P.C. on Cardova	65.64	0+40.00 (2+46.27)	64.00
0+26.57 = P.C. R.A. 34°06'18" 21.60' chd. 10' offset	65.87	0+46.27	64.43
2094 = 3' from 0°58'39"	66.05	+92.55 = P.C. R.A. 34°06'18" 36.12' chd. 10' offset	64.87
1°57'18"	66.23	2087 = "3' from 80°24'22"	65.06
2°55'57"	66.41	8°05'24"	65.25
3°54'36"	66.59	3°08'06"	65.45
4 = N.L. #1161 150' chd. 10' offset 175' chd. 10' offset 36' #1161 2135' chd. 10' offset	66.77	4°10'48"	65.64
5°42'12" (657.56")	66.92	5°13'30"	65.83
2071 = 3' from 6°40'08"	67.10	6°16'12"	66.03
7°38'	67.28	7°18'54"	66.22
8°35'54"	67.46	8°21'36"	66.41
9°33'54"	67.64	9°24'18"	66.61
10°31'50"	67.82	10°27'	66.80
N.E. Cor. Brindisi		11°29'25"	67.00
6 = cb.P.R.C. on Cardova	68.00	11°29'30" (0.856' 35") 10' offset	67.25
		1886 = 2' chd. 3' from 13°26'05"	67.50
		13°22'40"	67.50
		14°09'15"	67.75
SE. Cor. Brindisi		opp cb.E.C. on East	
cb.P.R.C. 1976 - chd. n off	69.00	15°15'50"	68.00
0		1771 = 3' from 16°09'26" (0°53'36")	68.22
		16°09'26"	68.22
0 = EC = 0+00 1°47'12"	69.49	17°03'09"	68.44
(-35.24) 0+35.24	69.94	0+49.62	69.08
70.48 = N.L. #1161 1-15.18	70.38	+99.24	69.72
0+85.66 = 20 1-3-37.61)	70.57	1448.16	70.36

P

41

74.15 = x from 40

3.79-
70.3 = TP on N.E. B.M. Cor. Cardova + Brindisi on Radius Sub

10.45 =
108.1 =

56.657	65.4	65.78	66.00	66.20	66.37	66.55	66.73	66.91	67.06	67.24
8.7	9.00	9.37	9.75	10.1	10.4	10.7	11.0	11.3	11.6	11.9
+4.0	+3.7	+4.16	+4.5	+4.8	+5.1	+5.4	+5.7	+6.0	+6.3	+6.6
+2.7	+3.1	+3.7	+4.2	+4.6	+4.9	+5.2	+5.5	+5.8	+6.1	+6.4

N.L. #1161
N.L. #1161

56.644	64.08	64.17	64.57	65.00	65.20	65.40	65.60	65.80	66.00
9.7	10.07	10.0	9.6	9.1	8.7	8.7	8.5	8.3	8.2
1.9	1.6	1.1	0.8	0.7	0.6	0.5	0.4	0.3	0.2
-1.2	-0.5	+0.7	-0.2	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1

cb.P.R.C. on Cardova + Brindisi on Radius Sub = EC

56.644	67.80	67.78	67.96	68.14	68.32	68.50	70.08	70.52	70.71
6.7	6.5	6.37	6.2	6.1	6.0	5.9	5.8	5.7	5.6
3.5	3.5	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6
+3.2	+3.1	+3.1	+3.1	+3.1	+3.1	+3.1	+3.1	+3.1	+3.1

N.L. #1161

66.17	66.36	66.55	66.75	66.94	67.14	67.30	67.5	67.6	67.90	68.1
8.0	7.8	7.6	7.4	7.2	7.0	6.7	6.7	6.5	6.2	6.0
10.6	10.5	10.1	10.0	10.0	10.0	9.8	9.3	8.3	7.3	6.7
-2.6	-2.7	-3.5	-3.6	-3.3	-3.0	-2.6	-1.8	-1.1	-0.7	-0.7

N.L. #1161

68.36	68.54	68.72	68.86	70.50
5.8	5.5	5.6	5.6	10.3
5.7	5.0	4.3	4.0	9.8
+0.1	+0.6	+0.3	+0.5	+0.5

70.15 = x from 40

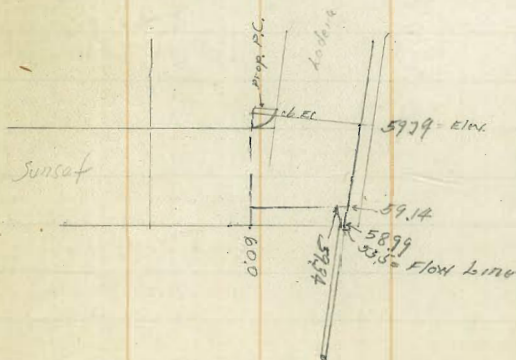
70.32 =
150.1
716.2 =
137
70.35 = TP
65.71
749.2 = x
66.57 = 5' from
482.1
712.1 =
687.2 = B.M.
6.72
750.4 = x

70.32 = B
259
791.1 = S.E. Return, Reset Brindisi + Cardova

69.13	69.16	69.37	69.85	70.51	71.44	72.37
3.78	3.75	3.54	3.06	2.40	1.97	0.60
4.0	3.8	2.9	2.4	2.4	1.9	
-0.2		+0.15	+0.11	+0.16	+0.28	

Sunset Cliffs Blvd. Cont.

Sta. No.	Blk. Grade	Yhs. Sta.	Yhs. Grade
⑥ = P.C.	60.60	P.C. def = 1°09'06" (0°14'20")	60.60
① 1989	60.98	2056 chd 10' off	60.98
②	61.20	1°27'52"	61.20
③	61.29	2°02'15"	61.29
④ = E.V.C.	61.24	④ = E.V.C. 2°16'38" (2°15'51")	61.24
① 2027 = chd 10' off	61.08	① chd 2°31'24"	61.08
② 2064 = " 3' from cbs.	60.94	② 2°46'10"	60.94
③	60.80	③ 3°01'	60.80
④	60.66	④ 3°15'22"	60.66
⑤	60.52	⑤ 3°30'28"	60.52
⑥	60.38	⑥ 3°45'14"	60.38
⑦ EC 1-36 on Sunset P.C. NE Cor. Leaders	60.24 60.00	⑦ = E.C. 4°00'00" 1-36.50	60.24 60.00



6419 = T from 46
194 -
6072 - T.P.
657 +
6879 - T

EL. 6074	6117	6134	6143	6136	6122	6108	6094	6080
Pos 74	74	73	74	74	75	77	78	80
22	22	25	28	34	42	38	30	27
+5.9	+5.1	+5.1	+4.6	+4.0	+3.4	+3.9	+4.9	+5.3

Yhs. 6065	6103	6125	6134	6127	6113	6100	6085	6071
24	24	30	29	29	31	28	24	21
-09	-13	-17	-21	-23	-23	-25	-19	-18

Blk. 6066	6057	6038	6014	} finish stakes	6513 = NE BK	6637
81	87	84	86		121	
21	27	32	36		6637	
+5.6	+5.6	+5.2	+5.0			

Yhs. 6057	6043	6029	6005	600	5934	5899	5874	585	4687
82	83	85	87	637	703	731	658	195	
107	106	108	107						
-1.9	-2.3	-2.3	-2.0						

6164 = T from 46	P.V.C.	E.V.C.									
057 -	EL. 6060	6038	6120	6129	6122	6108	6094	6080	6066	6052	6038
6107 - T.P.	102	066	044	035	022	056	446	410	474	488	502
433 +											
6540 = T	E.C.	Chk									
	EL. 6024	6000	6039	6079							
	5.16	5.40	5.01	4.61							

Walker
Shaw
Schoo
Ruplinger
12-18-27

AZURE VISTA ALLEY
Block (F)

S.L. Sta	N.L. Grade	N.L. Sta.	N.L. Grade
134.40	134.40	134.80	134.80
130.3	130.3	130.66	130.66
126.2	126.2	126.53	126.53
122.1	122.1	122.41	122.41
118.0	118.0	118.28	118.28
113.9	113.9	114.15	114.15
109.8	109.8	110.02	110.02
105.7	105.7	105.90	105.90
101.6	101.6	101.77	101.77
97.5	97.5	97.64	97.64
93.4	93.4	93.51	93.51
89.3	89.3	89.39	89.39
85.2	85.2	85.26	85.26
81.1	81.1	81.13	81.13
77.00	77.00	77.00	77.00
73.33	73.33	73.42	73.42
69.66	69.66	69.84	69.84
66.00	66.00	66.00	66.00

Note: Stations SAME AS SOUTH TO 6+80

7+57.14
11-42.34
+99.46 = E.L. Gordon

ENGINEERING DEPARTMENT,
CITY OF SAN DIEGO,
CALIFORNIA.

13769 = SY. BR. on Azules Cornish + Marcellus

13994 = T

1209 = TP

12706 = TP

these stakes to set see below

12480	13066	12653	12241	11828	11415	11002	10590	10177
514	928	1241	500	713	1326	470	882	1295
487	714	1747	332	903	1279	437	811	1205
+0.32	+0.14	-1.94	+1.68	+0.10	+0.47	+0.33	+0.71	+0.90
13440	13030	12622	12211	11800	11387	10974	10561	10148
559	964	1211	531	741	1382	492	902	1111
520	817	1661	361	880	1114	447	849	1118
+0.70	+1.10	+3.88	0.21	+0.61	-0.32	-0.55	-1.47	-0.07
105.71	101.6	97.5	93.4	89.3	85.2	81.1	77.00	73.33
89.39	85.26	81.13	77.00	73.33	69.66	66.00		
507	920	1332	474	857	1300	459	876	1197
469	876	1241	373	719	1113	215	516	850
+0.18	+0.38	+0.44	+0.43	+1.01	+1.68	+1.87	+2.44	+3.42
9000 = T								
1215	975	934	893	852	811	7700	7342	6984
66.00								
521	931	870	4.80	890	1300	150	808	1194
475	446	861	293	800	721	202	451	1276
+0.07	+0.46	+0.15	+0.09	+0.87	+0.90	+2.48	+3.53	+0.16
6892 = ch. on Brk. Cornish + Monaco								
13769 = SY. BR. Cornish + Marcellus								
13757 = T								
1281	1251	528	902	150	528	1089	154	514
+1.14	+0.56	+0.16	+0.30	-0.13	-1.59	-0.74	+0.38	-0.15
13480	13066	12653	12241	11828	11415	11002	10590	10177
891	934	571	924	1337	508	720	1333	538
641	1187	323	219	1290	475	857	1207	506
+2.46	+1.87	+1.58	+0.85	+0.47	+0.93	+0.61	+0.66	+0.30
8520	8110	7700	7333	6966	66.00			
573	783	162	529	876	1262			
207	107	293	320	520	1262			
+0.68	+0.79	+0.60	+0.36	+3.66	-0.04			
13480	13066	12653	12241	11828	11415	11002	10590	10177
567	980	1393	522	878	1362			
470	132	280	384	935				
+0.86	+0.97	+1.73	+2.42	+2.78	+3.27			
Levels backed in								
13480	13066	12620	12210	11800	11390	10980	10570	10160
4.55	575	161	571	731	1.37	547	9.57	1.33
723	0.60	551	921	147	617	11.08	1.52	5.01
+1.92	+1.01	+0.20	+0.40	+0.10	-0.70	-1.51	-0.57	+1.37
8730	8320	8520	8110	7700	7333	6966	66.00	
923	117	537	747	130	477	264	12.30	
757	132	485	873	102	248	305		
-0.08	-0.05	+0.52	+0.74	+1.02	+1.37	+3.57		
13480	13066	12653	12241	11828	11415	11002	10590	10177
375	787	1202	540	753	112	525	737	1.06
536	1018	383	857	899	494	881	0.27	4.73
+1.53	+1.84	+1.57	-0.04	+0.13	+0.31	+0.56	+0.71	+0.46
8939	8526	8113	7700	7342	6984	66.00		
732	118	531	744	1357	2.88	8.46	12.30	
590	285	435	761	122	2.56	5.68	12.31	
+0.92	+0.30	+0.76	+1.13	+1.65	+2.32	+2.78		
12781 = T								
0.60 =								
12741 = TP								
11347								
13855 = T								

This also Reset see below

12-22-27
 Street
 School

FLURE VISTA ALLEY

Bk. (H)

SL. Sta.	SL. Grade	N.L. Sta.	N.L. Grade
= 0+00 (8-47.5)	153.00		153.00
+47.5	146.18		
+95	139.36		
1+42.5	132.55		
+90	125.74		
2+37.5	118.93		
+85	112.12		
3+32.5	105.31		
+80 = Brk. (3-40')	98.50		98.50
4+20	94.90		94.90
+60 = "C"	91.30		91.30
5+00 = P.Y.C.	87.70		87.70
+30 = Brk.	84.68		84.68
+60 = " (1-39.97)	81.00	(2-39.97)	81.00
5+99.97 1-37.74	85.66	5+99.97	85.66
6+37.66 = E.L. Cordova	70.63	6+39.98 = E.L. Cordova	70.33

Grade same as South

146.28 = SE. B.Y. Cornish + Brundish

834 +									
154.62 = T									
12.92 -									
141.68 = TP									
0.75 +	SL 153.00	146.18	139.36	132.55	125.74	118.93	112.12	105.31	
14.63 = T	1.62	8.44	3.27	1.008	4.61	11.47	6.01	12.82	
12.76 -	1.13	7.92	2.35	1.016	4.47	10.78	5.89	12.60	
12.78 = TP	+0.49	+0.54	-0.08	0.98	+0.14	-0.09	+0.12	+0.72	
0.48 +	NL 153.00	146.18	139.36	132.55	125.74	118.93	112.12	105.31	
1303.5 = T	1.62	8.44	3.27	1.008	4.61	11.42	6.01	12.82	
12.84 -	2.32	9.54	4.01	1.022	4.81	10.78	5.81	12.15	
117.51 = TP	-0.70	-1.10	-0.74	-0.24	-0.24	+0.64	+0.20	+0.67	
0.62 +	SL 98.50	94.90	91.30	87.70	84.68	81.00	85.66	70.63	
115.3 = T	7.80	11.40	7.02	2.22	9.74	12.92	6.21	11.24	
12.41 -	6.29	10.68	7.12	2.22	8.11	11.32	2.87	10.89	
105.7 = TP	+1.41	+0.72	+0.68	+0.05	+0.43	+1.40	+3.34	+0.35	
0.50 -	NL 98.50	94.90	91.30	87.70	84.68	81.00	85.66	70.33	
12.00 -	7.80	11.40	7.02	2.22	9.74	12.92	6.21	11.34	
7.30 = TP	6.29	10.41	6.72	2.22	8.76	12.11	2.92	10.81	
0.62 +	+1.55	+0.73	+0.70	+0.60	+0.68	+1.81	+3.29	+4.93	
2.99 = T									
12.69 -									
81.23 = TP									
0.64 +									
81.57 = T									
15.48									
7.25 = Brk Cordova + Algaciras									

This Alley Reset see below

SL 153.00	146.18	139.36	132.55	125.74	118.93	112.12	105.31	98.50
1.55	8.27	4.77	11.78	6.44	1.09	7.90	7.49	7.30
8.07	5.19		6.27	12.11	7.50	1.62	7.70	
+0.35	-0.11		-10.27		7.90	0.81	11.40	
NL 153.00	146.18	139.36	132.55	125.74	118.93	112.12	105.31	98.50
1.55	8.37	4.97	11.78	6.74	1.09	7.90	7.49	7.30
8.07	5.37		11.88	6.63	0.35	7.60	1.80	7.67
-0.59	-0.80		-0.70	-0.17	1.74	2.90	+0.67	+1.63
SL 94.90	91.30	87.70	84.68	81.00	85.66	70.63		
12.70	8.01	7.61	10.63	2.27	7.61	12.64		
12.30	3.26	7.31	12.14	0.80	4.33	12.73 = cut		
+1.60	+0.75	+0.76	+0.44	+1.47	+3.98			

N 94.90	91.30	87.70	84.68	81.00	85.66	70.33		
12.70	8.01	7.61	10.63	2.27	7.61	12.94		
12.30	3.26	7.31	12.14	0.80	4.33	12.84 = cut		
+1.60	+0.75	+0.76	+0.44	+1.47	+3.98			
7.51 = Brk Cordova + Algaciras								
7.76 +								
8.37 = T								
5.29								
5.83								
12.64 +	119.67 = T.R. below							
2.53 = T	12.51 +							
0.11 -	102.18 = T							
70.94 = TP	0.42							
12.64 +	131.70 = TP							
107.80 = T	12.51 +							
0.29 -	44.33 = T							
107.77 = TP	0.36 -							
12.23 +	143.97 = TP							
14.00 = T	10.58 +							
0.25 -	154.55 = T							
119.67 = TP								

Shelley
Shaw
Ripley
1904
S.H.

AZURE VISTA ALLEY

B.K. (1)

S.L. Sta	S.L. Grade	N.L. Sta.	N.L. Grade
146.70	146.10	146.20	146.40
+0+00			
+40	137.80	137.95	
+80 = Brk.	129.50	129.50	
G-50			
1+30	123.89	123.89	
+80	118.27	118.27	
2+30	112.65	112.65	
+80	107.03	107.03	
3+30	101.41	101.41	
+80 = Brk.	95.80	95.80	
{5-41.82}			
4+21.82	92.36	92.36	
+63.64	88.92	88.92	
5+05.46	85.48	85.48	
+47.28	82.04	82.04	
5+59.11	78.60	78.30	

Stations
Some of South
Stations
Some of South

147.08 = N.W. B.M. Cornish + 71 geiros

124 +

148.32 = T

122.5 -

136.07 = TP

011 +

136.18

126.4 -

128.54 = TP

067 +

124.21 = T

129.8 -

111.23 = TP

066 +

111.89 = T

127.9 -

99.10 = TP

046 +

79.56 = T

12.66 -

86.90 = TP

020 +

87.30 = T

146.20 = 010 below top of Carb

N.L. 146.40 137.95 129.50 123.89 118.27 112.65 107.03 101.41

1.92 10.37 6.68 12.29 5.94 11.56 4.81 10.48

1.35 9.54 5.23 10.93 5.23 11.25 4.68 9.87

+0.57 +0.83 +1.45 +1.46 +0.71 +0.31 +0.18 40.57

-0.77

146.70 137.80 129.50 123.89 118.27 112.65 107.03 101.41

7.22 10.57 6.68 12.29 5.94 11.56 4.86 10.48

8.40 8.86 6.91 9.18 5.49 11.50 5.63 11.43

+4.87 +1.66 -0.27 +3.11 +0.35 40.06 -0.77 -0.75

-0.77

N.L. 95.80 92.36 88.92 85.48 82.04 78.30

3.76 7.20 10.64 1.87 5.26 9.00

3.90 7.80 11.18 1.36 4.63 5.57

-0.14 -0.60 +0.54 +0.46 +0.63 -0.51

S.L. 95.80 92.36 88.92 85.48 82.04 78.60

3.76 7.20 10.64 14.08 5.26 8.70

3.66 6.31 9.38 12.66 3.26 8.12

+0.10 +0.89 +1.26 +1.42 +1.30 +0.58

Alley Reset.

87.08 = N.W. B.M. Cornish + Carmelo (Levels Backed 112)

3.67

90.24 = T

0.86

70.24 = TP

1.74 +

103.18 = T

041 -

107.77 = TP

12.15 -

111.97 = T

001 -

114.91 = TP

12.44 +

107.33 = T

024 -

117.09 = TP

13.54 -

130.04 = T

036 -

139.48 = TP

10.76 +

150.1 = T

S.L. 145.70 137.80 129.50 123.89 118.27 112.65 107.03 101.41 95.80 92.36

4.54 12.11 10.34 3.44 7.06 7.77 7.87 1.77 7.38 10.87

9.44 5.33 2.27 8.85 2.13 8.58 2.63 7.17 7.84

+3.00 4.81 13.70 10.21

-0.71

N.L. 146.20 137.95 129.50 123.89 118.27 112.65 107.03 101.41 95.80 92.36

4.09 1.89 10.34 3.44 7.06 7.77 7.87 1.77 7.38 10.87

0.36 3.88 1.97 8.31 10.76 1.10 7.33 11.37

+1.53 +1.46 +1.57 +0.75 +0.13 +0.67 -0.15 -0.50

S.L. 88.92 85.48 82.04 78.60

1.37 4.76 8.70 11.64

0.80 3.78 6.80 11.77 = cut MARK.

+1.32 +1.54 +1.40

N 88.92 85.48 82.04 78.30

1.37 4.76 8.70 11.94

1.76 4.20 7.46 12.08 = cut MARK.

-0.44 +0.56 +0.74

12-27
 12-27
 12-27

AZURE VISTA Alley
 Bk. (T)

Stn. Sta.	Sb. Grade	Nb. Sta.	Nb. Grade
W. Side Drive		W. Cornish	
= 0+00	137.70	= 0+00	138.00
+26.32	134.56	+29.76	134.56
-50		-50	
+76.32	128.78	+79.76	128.78
1+26.32 - Bk	123.00	1+29.76	123.00
(5-50)		(5-50)	
1+76.32	118.30	+79.76	118.30
2+26.32	113.60	2+29.76	113.60
+76.32	108.90	+79.76	108.90
3+26.32	104.20	3+29.76	104.20
+76.32 = Bk	99.50	+79.76	99.50 = Bk.
(1-50)		(1-50)	
4+26.32	93.52	4+29.76	93.52
1-36.34		1-36.34	
4+57.8 = El. Cordova	88.83		88.62 = El. Cordova

141.15 = NW. B.M. Cornish + Cornelia See Page 79

Stn. Sta.	Sb. Grade	Nb. Sta.	Nb. Grade
129.50-T		H 138.00	134.56
123.33		128.78	123.00
117.97-T		118.30	113.60
07.44		108.90	104.20
118.71-T		99.50	99.50
12.57		93.52	93.52
105.70-T		88.83	88.62
10.57-El			
12.29			
79.67-T		N 138.00	134.56
4.93		128.78	123.00
97.50-T		118.30	113.60
10.85		108.90	104.20
87.05		99.50	99.50
27.00-B.M.		93.52	93.52

N.E. Cordova + Cornelia

NW. B.M. Cornish + Cornelia

Stn. Sta.	Sb. Grade	Nb. Sta.	Nb. Grade
141.15		141.15	
0.41		137.50	
141.56		137.70	134.56
12.30		128.78	123.00
129.76-T		118.30	113.60
0.26		108.90	104.20
119.33-T		99.50	99.50
12.70		93.52	93.52
116.27-T		88.83	88.62
0.92			
117.04-T			
13.10			
103.94-T			
0.57			
104.53-T			
9.53			
75.00-T			
16.27			
96.67-T			

St. 101
Rampage
Shanty
Shed 12.71

HZURE VISTA Alley
Bk. (K)

N.L. Sta.	N.L. Grade	S.L. Sta.	S.L. Grade
= 0+00	131.88	= 0+00	131.84
+20.12 (2-50)	129.58	+22.86 2-50	129.54
+70.12	123.76	+72.86	123.76
1+20.12 - Bk. (2-50)	118.00	1+22.86 = Bk. 2-50	118.00
1+70.12	109.50	1+72.86	109.50
2+20.12 - Bk. 2-50	101.00	2+22.86 = Bk. (2-50)	101.00
2+70.12	96.50	2+72.86	96.50
3+20.12 1-33.73	92.00	3+22.86 (1-26.78)	92.00
3+53.82 = E.L. Cardera	88.90	3+49.14 = E.L. Cardera	88.42

4115 = N.W. B.M. Cornish + Cornulo

N.L. Sta.	N.L. Grade	S.L. Sta.	S.L. Grade
134.3 - TP	131.84	129.54	123.76
028 +	275	505	1083
134.39 - TP	131.84	129.54	123.76
1328 -	273	507	1087
10931 - TP	118.00	109.50	101.00
024 +	116	1365	96.50
13205 - TP	131.88	129.54	123.76
1290 -	271	505	1083
10965 - TP	118.00	109.50	101.00
022 +	116	1365	96.50
11037 - TP	131.88	129.54	123.76
116 -	271	505	1083
9971 - TP	118.00	109.50	101.00
120 -	116	1365	96.50
9941 - TP	131.88	129.54	123.76
1036 -	271	505	1083
8905 - TP	118.00	109.50	101.00

8907 = N.E. B.M. Cardera + Cardera

N.L. Sta.	N.L. Grade	S.L. Sta.	S.L. Grade
126.31 = B.M. Cornish + Cardera	131.88	129.52	123.76
7694	272	504	1082
134007	131.88	129.52	123.76
1238 -	270	502	1080
171.67 = TP	118.00	109.50	101.00
0214	116	1365	96.50
121.83 +	131.88	129.52	123.76
1297 -	270	502	1080
10891 - TP	118.00	109.50	101.00
0193	116	1365	96.50
10970 - TP	131.88	129.52	123.76
1172 -	270	502	1080
7116 - TP	118.00	109.50	101.00
170 -	116	1365	96.50
7182 - TP	131.88	129.52	123.76

547

2016
Rup. 12-27
Shay
Shay

AZURE VISTA Alley
B/A. (C)

S.L. Sta. Medium Triangles Line = 0400	S.L. Grade	N.L. Sta. Medium Triangles Line = 0400	N.L. Grade
+19.51	151.91	+22.58	152.09
+69.51	149.87	+72.58	149.77
+22.58 = S.L. Cornish	144.65	+22.58 = S.L. Cornish	144.65
	139.11		139.52

557

	T	T
	15387	15387
141.15		
12.72 +		
153.87 = T		
152.63 = TP	S.L. 151.91	149.87
376 +	6.48	8.52
158.39 = T	2.42	4.50
	+4.06	+4.02
	152.09	149.77
	6.30	8.62
	1.12	4.35
	+5.08	+4.77
		+3.39
		+2.56
149.77 = Elev. Grade	RESET 4-23-28	
427 = cut		
152.09 = Elev. Sta. = 0400	S.L. 151.91	149.87
211 +	4.24	6.78
156.15 = T	3.54	5.97
	+0.70	+0.31
	152.09	149.77
	4.06	6.38
	1.84	5.28
	+1.77	+1.10
		-0.36

Yellow
Bulphur
Shoshone 12-22

AZURE VISTA ALLEY

B/K. (N)

E.L. Sta.	E.L. Grade	M.L. Sta.	M.L. Grade
Sh. Cap. Hilo	70.73	SL Carmelo	70.06
= 0+00		- 0+00	69.94
17.36 = chd. 10' offset	70.77		
0	71.21	18.10 = chd. 10' off	70.77
	71.60		
1 = Brk. " 1° 09' 06"	71.70		71.60
(0° 43' 22")			
	72.37		
2 21.72 = chd. 10' offset	72.45	22.83 = chd. 10' offset	72.37
	73.10		
3	73.20		73.14
	73.91		
4	73.95		73.91
	74.68		
5	74.70		74.68
	75.44		
6 - RC	75.44		75.44
	76.06	18.57 = chd. 10' off	76.06
7 12.19 = chd. 10' offset	76.06		
	76.68		76.68
8	77.31		
	77.93		77.31
9	77.93		
	78.55		77.93
10	78.55		
	79.17		78.55
11	79.17		
12 - Brk.	79.80		79.17
(0° 15' 36")			
13 19.95 chd. 10' offset	79.80	20.30 = chd. 10' offset	79.80
	79.72		
14	79.72		79.72
	79.63		
15	79.63		79.63
	79.54		
16	79.54		79.54
	79.45		
17	79.45		79.45
	79.36		
18	79.36		79.36
	79.27		
19	79.27		79.27
	79.18		
20	79.18		79.18
	79.09		
21	79.09		79.09
	79.00		
22 = E.C. = Brk	79.00		79.00
(2° 48' 41")			
23	76.90		76.90
	74.80		74.80

Stations and deflections all opposite the East side

5822 = NE. BM. Sunset Carmelo

E.L. Sta.	E.L. Grade	M.L. Sta.	M.L. Grade
1236+			
81.91	70.06		69.94
1.05			
802.6 = TP			
1071			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77
10.44			
7607 = TP			
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71.29			
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77.33	70.77		70.77
10.44			
7607 = TP			
640			
71.29			
77.33	70.77		70.77

Yal Kap
Ruplingor
Shah
Mada

Azure Vista Sewer

IN MONACO ST. 8"
from Sunset to Gridary thence North
to Hillry BIK.E. " EAST.

Station	TP	Elev. Flow line	Station	Elev. Flow line	Station	Elev. Flow line
2+11.435	7.57	51.51	4+192	51.33	6+16.54	76.54
=0+00			12.77	38.74	32.20	76.54
+50			10.43	41.08	35.65	+5.43
1+00			7.04	44.47	39.10	+5.37
+50			3.39	48.12	42.55	+5.57
TP 12.71	64.04	2.18	51.33	51.33	42.55	+5.57
2+04.5 N.H.#35			12.06	51.98	46.00	+5.98
4-41.25			8.81	55.23	48.00	+7.23
2+41.25			5.06	58.98	50.00	+8.98
+82.5			1.87	62.17	52.00	+10.17
3+23.75	TP 5.91	69.95	0.00	64.04	54.00	+10.32
3+65 = D.M.H.#21			5.63	64.32	56.00	+8.32
4-40.57			5.96	63.99	54.22	+9.77
0+40.57			5.35	64.40	54.45	+9.95
+81.14			5.62	64.33	54.67	+9.66
1+21.71			5.06	64.89	54.90	+9.99
1+62.29 = D.M.H.#20			5.21	64.74	55.10	+9.64
4-39.59			5.55	64.40	55.30	+9.10
2+01.85			6.23	63.72	55.50	+8.22
2+41.44			6.70	63.25	55.70	+7.55
2+81.03			6.73	63.22	55.90	+7.32
3+20.67 = M.H.#19			7.35	62.60	56.10	+6.50
(4-40.51)			8.09	61.86	56.30	+5.56
3+61.15			8.22	61.73	56.50	+5.23
4+01.66			8.71	61.24	57.00	+4.24
4+42.17						
4+82.67 D.M.H.#18						
1-48.78						
5-731.45 = D.E.						

Sewer in BIK.E

Station	TP	Elev. Flow line	Station	Elev. Flow line	Station	Elev. Flow line
0+00 = D.M.H.#18			12.29	75.91	6+16.54	76.54
+47.36			10.70	64.51	60.99	+3.52
+9.472			6.92	68.27	63.98	+4.31
1+42.08			4.13	71.05	66.97	+4.11
1+89.44			0.88	74.33	69.96	+4.37
TP 12.71	87.08	0.86	74.33	74.33	69.96	+4.37
2+36.8 = M.H.#10			3.95	77.83	72.96	+4.77
2+81.8			3.92	81.16	75.80	+5.36
3+26.8			3.24	83.84	78.64	+5.20
3+71.8			0.34	86.74	81.48	+5.26
TP 12.72	99.46	0.34	86.74	86.74	81.48	+5.26
4+16.8			1.02	89.42	84.32	+5.10
4+61.8			7.28	94.8	87.16	+5.02
5+06.8 = M.H.#9			3.74	95.72	90.00	+5.72
TP 12.40	111.98	0.38	95.72	95.72	90.00	+5.72
5+52.44			7.35	102.23	97.00	+5.23
5+98.08			1.81	109.67	104.00	+5.67
TP 12.72	123.85	0.35	111.13	111.13	104.00	+5.67
6+43.72			6.46	117.37	111.00	+6.37
TP 12.49	136.33	0.01	123.84	123.84	111.00	+6.37
6+89.36			11.89	124.44	118.00	+6.44
7+35 = D.E.			4.17	132.16	125.00	+7.16
TP 9.39	145.20	0.52	135.81	135.81	125.00	+7.16
			7.45	137.75		
			137.69 = D.M.			
			0.06			

66

Walker
Ruplinter
Shaw
Shea 2-15-28

AZURE VISTA SEWER
IN Cornish Dr.
Bot. Hill to E Monaco thence East to DE

Sewer IN B.H.E.

DE South of Hill st. 7.57	145.76		137.67	SP. B.H. Cornish	Manillas
= 0 + 00		4.15	141.11	139.00	+ 2.11
+ 31.75		3.24	142.02	138.85	+ 3.17
+ 63.5 = 1st M.H. #1		2.80	142.46	138.70	+ 3.76
6-525					
1+16		3.28	141.98	137.20	+ 4.78
+ 68.5		4.29	140.97	135.70	+ 5.27
2+21.0		5.33	139.93	134.20	+ 5.73
2+73.5		6.81	138.45	132.70	+ 5.75
3+26.0		8.95	136.31	131.20	+ 5.11
				129.70	+ 5.16
3+78.5 = D.M.H. #2 = 2nd M.H.		10.40	134.86	123.00	+ 11.86
3-525 TP. 3.31	146.00	4.57	140.69		
4+31.0	138.67 = H.I. from before	7.02	131.63	123.50	8.15
4+83.5		9.35	129.32	124.00	+ 6.92 5.32
5+36 = M.H. #3 = 3rd M.H.	146.00	9.51	129.16	124.50	+ 4.66
5-4657				129.67	4.86
5+52.67		13.47	132.53	129.67	2.86
6+29.34		7.25	131.75	134.84	+ 3.91
6+76 = DE on Monaco	146.00	11.65	147.65	140.00	+ 7.65
4.23	138.67	11.56	134.44 = B.H.		

AZURE Vista Sewer
in BIK F

N.H. #2 Page 61 188	139.57	137.69 = S.M. BM Cornish +	Marjeil/as
= 0.400	4.76	129.70	+ 4.89
6-46.94		134.59	+ 11.59
0+46.94	6.95	132.52	+ 12.18
193.88	10.69	128.88	+ 11.21
T.P. 0.76	12.81	126.76	
1+20.82	3.26	124.26	+ 9.25
+87.76	7.58	119.94	+ 7.60
2+34.7	11.57	115.95	+ 6.28
T.P. 0.48	12.90	114.62	
2+81.64 = S.M. #11	3.09	112.01	+ 5.01
6-46.67		107.89	+ 4.80
3+28.31	7.21	103.09	+ 4.80
3+74.98	10.74	104.36	+ 5.18
T.P. 0.89	12.47	102.63	
4+21.65	2.48	100.54	+ 5.28
4+68.32	6.28	96.74	+ 5.40
5+15	10.98	92.04	+ 4.62
T.P. 0.86	12.95	90.07	
5+61.64 = N.H. #12	2.48	88.45	+ 4.95
6-47.79		84.41	+ 4.84
6+09.43	6.52	84.41	+ 4.84
6+57.22	10.13	80.80	+ 5.14
T.P. 0.32	12.63	78.30	
7+05.02	2.01	76.61	+ 4.87
+52.81	6.05	72.57	+ 4.73
8+00.6	10.94	67.68	+ 3.77
8+48.4 = D.M.H. #20 Page 60	13.88	64.74	63.91
			60.00
			54.9

FIGURE VISTA Sewer

IN Cordova St.
bet. Monaco + Ladera.

8" Sewer 70.32 = 814 Brindisi + Ladera
54.00

DMH #21 Page 60 5.45 75.77							
= 0+00						56.00	
+50.91							
0+50.91		10.72	65.05	56.50	+8.58		
1+01.82		10.96	65.81	57.00	+8.31		
+52.73		10.15	65.62	57.50	+8.12		
= Δ R. 130.56' R. turned				58.00	+8.16		
2+03.66 = DMH #22 = 2' Alley Bkt. G.	9.61	66.16	60.00 =		Line East. 6.16		
(4-43.67)							
2+47.33		9.39	66.35	58.50	+7.88		
2+49.10		9.29	66.48	59.00	+7.88		
3+34.67		8.76	67.0	59.50	+7.51		
= Δ Brindisi St							
+78.36 = DMH #23 = Δ R. 150.11'	7.49	68.28	60.00		+8.28		
(4-40.12)							
4+18.48		7.27	68.50	60.50	+8.00		
+58.60		6.95	68.92	61.00	+7.82		
+98.72		6.34	69.43	61.50	+7.93		
= Δ R. 209.94 R. 2016 = Turned							
5+38.84 = DMH #24 = 2' Alley Bkt. H	6.06	69.71	62.00		+7.71		
(7-45.53)							
5+84.37	17.46	81.77	54.6	70.31	63.14	+7.17	
6+29.9		10.92	70.85	64.28	+6.57		
+75.43		10.50	71.27	65.42	+5.85		
7+20.96		9.95	71.82	66.56	+5.76		
+66.5		8.26	73.51	67.70	+5.81		
8+12		6.22	75.55	68.85	+6.70		
= Δ Alley Bkt I Enroll		4.81		70.00	+6.96		
+57.55 = DMH #25 Lt. 1°57'13"			76.96	71.00 =	East limit +59.6		
(7-45.81)							
9+03.36		2.58	79.19	71.47	+7.62		
+49.17 T.P. 13.45 93.89	0.33	81.44	72.94		+8.50		
+94.98		10.35	83.57	74.41	+9.13		
10+40.8		8.58	85.31	75.88	+9.43		
+86.6		8.42	85.47	77.35	+8.12		

Cordova Cant

93.89					
11+32.41		7.29	86.60	78.82	77.8
= Δ R. 147.04' R. 16"					
11+78.19 = DMH #26 = 2' Alley Bkt. J	5.95		87.94	80.30	77.64
(3-46.33)				83.00 =	74.94
12+26.52		4.84	89.05	81.53	77.52
12+74.85		3.47	90.42	82.7	77.66
13+23.18 = D.E. = 64744'16"	2.25		91.64	84.00	77.64
T.P.		6.75	87.14		
			87.08 =		
			0.06		87.14

AZURE VISTA Server
Blk. G.

6616

64

MH #	Notes	Value	1st	2nd	3rd	4th
MH #4 - 2 Cornish	333	137.77	134.44	= SE. Blk. Cornish + Monaco		
= 0+100			187	135.90	130.70	+5.20
(8-46.25)						
46.25			5.60	132.17	125.48	+6.69
+92.50			11.82	125.95	120.27	+5.68
1+38.75	TR 0.49	125.29	12.97	124.80		
			4.96	120.33	115.06	+5.27
+85			10.45	114.84	109.85	+4.99
2+31.25	TR 0.65	113.48	12.46	112.83		
			3.86	109.62	104.63	+4.99
+77.50			9.10	104.38	99.42	+4.96
3+23.75	0.36	101.21	12.63	100.85		
			1.77	99.44	94.21	+5.23
3+70 = 8 MH #13			6.67	94.54	89.00	+5.54
7-48.88			10.32	90.89	84.85	+6.04
4+18.9	TR 0.15	88.27	13.09	88.12		
+67.8			1.39	86.88	80.71	+6.17
5+16.7			6.06	82.21	76.57	+5.64
+65.5			10.47	77.80	72.42	+5.38
6+14.4	TR 0.81	76.80	12.28	75.99		
			3.51	73.29	68.28	+5.01
+63.3			8.67	68.13	64.14	+3.99
7+12.2	DMH #22	Apr 63	10.71	66.09	60.00	
				58.00		

AZURE VISTA Sewer

B/k. H

2 MH #24	541	80.92		755' - SE. B.M. Cordova + Myecurus		
Page 63 0+00 = d. Cordova st. 6+48.17			11.22	697.0	62.00	+77.0
0+48.17			8.43	724.9	67.25	+57.4
+96.38			0.88	800.4	72.50	+7.54
1+44.57 T.P. 12.43	72.92		0.43	80.47		
			7.73	85.19	77.75	+7.44
1+92.76			3.19	89.73	83.00	+6.73
2+40.95 T.P. 12.90	105.17		0.65	92.27		
			10.93	94.24	88.25	+5.99
2+89.13 = d. MH. #14 (7-45.43)			5.74	99.43	93.50	+5.93
3+34.57 T.P. 12.36	117.48		0.05	105.12	99.71	+5.41
+80			6.10	111.38	105.92	+5.46
4+45.43 T.P. 12.24	129.66		0.06	117.42		
			11.50	118.16	112.13	+6.03
+70.86			5.11	124.35	119.35	+6.20
5+16.30 T.P. 12.57	142.18		0.05	129.61		
			11.19	130.99	124.56	+6.43
5+61.7			4.48	137.70	130.78	+6.92
6+07.13 T.P. 12.30	154.34		0.14	142.04		
			10.24	144.10	137.00	+7.10
			7.96	146.38		
				146.28 = SW. B.M. Cornish + Cornish		
				0.10		

Azure Vista Sewer
 1/2 Alley BIK I

= 1/2 DM Cornish 1/2 Cornish

DMH # 5	1/2 Cornish	732	148.47	141.15	141.50	+7.14
= 0+00						
(7-85.71)						
0+45.71						
TP 0.35		136.18		148.64	136.00	+12.64
+91.42				799	140.48	+19.63
				12.64	135.83	
				498	131.20	+54.9
1+37.13				11.03	125.15	+4.58
TP 0.51		123.78		12.91	120.57	
+82.84				3.56	120.27	+4.79
					115.43	
2+20.55				8.55	115.23	+4.95
TP 0.27		111.39		12.66	111.12	
+74.26				1.63	109.76	+4.62
					105.14	+4.55
					100.00	+4.55
3+20 = 1/2 DMH # 15				6.84	104.55	+4.55
7 45.80					98.00	
3+65.80				12.04	99.35	+5.26
TP 0.48		99.14		12.78	94.15	
+11.60				4.54	98.66	+4.30
					94.60	
+57.40				8.30	90.30	+4.40
					86.44	
5+63.2				11.68	87.46	+4.88
TP 1.08		57.81		12.41	82.58	
+49.0				4.20	86.73	+4.89
					83.61	
5+74.8				8.06	79.75	+4.89
					74.86	
					71.00	
6+40.58 = 1/2 DMH # 25	1/2 Cornish	1094	74.87	70.00		

See Page 63

Use Cuts on Page 63

AZURE VISTA Sewer
 of ALM J BIK. J
 Front Cordova East.

D.M.H #	Page	11.41	98.49	87.08	84 Cordova + Corridor 80.30	83.00	
= 04.00 (6-46.83)							
0+46.83			8.04	90.45	86.92		+3.53
+93.66			1.01	97.48	90.84		-6.64
1+40.5	T.P. 1308	111.10	0.47	98.02			
			9.19	101.91	94.76		+7.15
1+87.3			4.76	106.34	98.67		+7.67
2+34.16	T.P. 1301	123.70	0.41				
				110.69	102.58		+8.11
+81.0	M.H. #16		9.04	114.66	106.50		+8.16
(4-41.75)							
3+22.75			4.93	118.77	111.12		+7.65
+64.50			0.67	128.03	115.75		+7.28
4+06.25	T.P. 1218	135.75	0.13	123.57			
			7.97	127.78	120.37		+7.41
+48 = DE			3.20	127.55	125.00		+2.55

AZURE. Vista Sewer
 Sunset Cliffs Blvd.

Walker
Ruplinger
Shaw
5/20 2-9-98

M.H. #35 Page 60	1.99	43.91	41.92 = NE BM Curve	12.00
= 0+00				
(4-45.5)		5.17	38.74	32.20
+45.5		6.33	37.58	32.47
+91.0		6.46	37.45	32.75
1+36.5		6.55	37.36	33.02
1+82 = 2 M.H. #36 Δ Rt. 2°29'44" 6.42		6.42	37.49	33.30
(4-45.67)				
2+27.67		6.00	37.91	33.57
+73.34		5.88	38.03	33.85
3+19		5.75	38.16	34.12
76.69 = 2 M.H. #37 Δ Rt. 25.2°		5.57	38.34	34.40
(5-51')				
4+15.69		5.13	38.78	34.72
4+66.09		4.20	39.71	35.04
5+47.69		3.95	39.96	35.36
5+68.69		4.06	39.85	35.68
6+19.69 = DE.		3.78	40.13	36.00

Above M.H. #35 Sunset Cliffs Sewer South of Monaco

- 0+00		43.91	5.17	38.74	32.20	+6.54
+47.57						
TP 9.35 47.03		6.29	37.62	31.60		+6.02
295.15 = Δ = 2 Settling tank		6.23	37.68	31.00		+6.78
(7-48.15)				32.00		+5.68
1+43.3			9.01	38.02	32.71	+5.31
+91.45			8.48	38.55	33.42	+5.13
2+39.60			7.71	39.32	34.14	+5.18
+87.75			6.66	40.37	34.85	+5.52
3+35.9			6.43	40.80	35.57	+5.23
+84.05			5.72	41.31	36.28	+5.03
4+32.20 = M.H. #34 Rt. 26°35'		4.72	42.81	37.00		+5.31

Cont. on Page 69

Sunset Cliff Sewer
Cont.

(6-46.70) 4+78.50	4703	388	4315	38.00	+515
5+24.8		340	4363	39.00	+463
+71.10		247	4456	40.00	+456
6+17.4		141	4562	41.00	+462
-16.7 T.P. 1033	5706	0.30	4673	42.00	+473
7+10 = 2 M.H. #33 (46.67) 6		9.27	4779	43.00	+479
7+56.67		846	4860	44.00	+460
8+03.34		746	4960	45.00	+460
+50		666	5040	46.00	+440
+96.66		575	5131	47.00	+431
9+43.33		472	5234	48.00	+434
+90 = 2 M.H. #32 = Δ 6°02'09" Lt. (49.80) 6		344	5362	49.00	+462
0+49.8		235	5471	49.50	+521
+99.6		210	5496	50.00	+496
1+49.4 T.P. 1021	66.36	0.91	5615	50.50	+565
+99.2		893	5743	51.00	+643
2+49.0		750	5886	51.50	+736
+98.82 = M.H. #31 Lt. 9°05'15" Lt. (44.15) 7		647	5989	52.00	+789
3+42.97		552	6084	52.43	+841
+87.12		589	6047	52.86	+761
4+31.27		6.00	6036	53.29	+707
+75.42		6.03	6033	53.72	+661
5+19.57		6.25	6011	54.15	+596
5+63.72		6.73	5963	54.58	+503
6+07.87 = 2 M.H. #30 in Ladera (Cbk. 6) B.M. Sunset Ladera		6.41	5995	55.00	+495
Ladera of Sewer Page 70		1.21	6515		
			6512 = B.M.		
			0.02		

Water
Kupinger
2-15-28

AZURE Vista Sewer in Cornish Dr.
From Lodera St. North

DE. at Lodera St	7.61	1A031	132.70 = N.Y. BM	Cornish-Lodera
-9+00 (0-47.87)		10.63	129.68	127.60 +268
+47.59		7.79	130.52	126.66 +3.86
+95.18		9.05	131.26	126.33 +4.93
1+22.79 = S.M.H. #8 (2-41.10)		8.01	132.30	126.00 +6.30
-1+83.9		7.85	132.46	127.00 +5.46
2+25 = S.M.H. #7 (4-46)		6.95	133.36	128.00 +5.36
2+65		6.29	134.02	128.75 +5.27
3+85		6.18	134.13	129.50 +4.63
7.45		5.64	134.67	130.25 +4.42
+85 = S.M.H. #6 (3-45.84)		5.39	134.92	131.00 +3.92
4+30.84		3.85	136.46	132.15 +4.31
+76.68 = S.M.H. #9 (5-48.87)		2.57	137.74	133.30 +4.44
5+25.55 T.P. 12.87	151.93	1.25	139.06	134.54 +4.52
+74.42		11.38	140.55	135.78 +4.77
6+23.3		9.80	142.13	137.02 +5.11
6+72.2		8.24	143.69	138.26 +5.43
7+21 = DE.		6.99	144.94	139.50 +5.44

Sewer in Cornish Drive
From S. Alley in Blk. I North.

15193 = HI from opposite page

			136.00	+11.97
396	147.77		141.50	+6.27
447	147.46		142.50	+4.96
358	148.35		143.50	+4.85
293	149.00		144.50	+4.50
170	150.23		145.50	+4.73
0.45	151.48		146.50	+4.98
1.06	152.11		147.50	+4.61

S.M.H. #5
= 0+00
(48.75)

0+48.75
+97.5

+6.38
1+46.25
+95

+5.36
2+48.75 T.P. 1.69
153.17
+5.27
2+92.5 = DE

Sewer in Cornish South of Blk G
DE. 265' South S.M.H. #8
Above H.I.

			153.17	+2.86
			150.31	144.70 +5.61
			147.78	142.36 +5.42
			145.64	140.02 +5.62
			142.98	137.69 +5.29
			140.72	135.36 +5.36
			138.38	133.02 +5.36
			136.20	130.70 +5.50
			134.41	
			131.44	
			0.03	

Sewer in Blk. C From Cornish to Ely Line AZURE Vista
127.8 151.84 139.06 = Above T.P. 34.5-25.55

0+00 = S.M.H. #9 3-48.13			133.30	+4.44
0+48.13		10.02	141.82	137.87 +3.95
+96.3		5.19	146.65	142.44 +4.21
1+44.5 = DE.		4.059	152.43	147.00 +5.43

Sewer in Carrish Drive

0+00 = top cb. 4000
 +06 = beginning of culvert flow line 3650
 +33 = End of culvert " " 3500

Sewer in CASITAS St

0+00 12.85 132.70 at N.W. corner of Casitas
 = MH # 7 Page 71 145.55 11.98 132.57 128.00 15.57
 +46.67 T.P. 12.88 158.93 6.13 139.42 136.67 12.75
 +93.94 T.P. 10.15 167.74 8.82 149.51 145.34 14.17
 1+40 = D.E. Ely line figure 154 5.74 162.00 154.00 8.00

Sewer in ALBECIRAS St

0+00 12.85 141.08 at N.W. corner of Albeciras
 = 0+00 159.93 11.61 148.32 141.50 17.37
 +46.85 T.P. 12.87 172.46 5.97 153.96 149.33 14.63
 +93.70 9.84 159.59 163.28 157.16 16.12
 1+40 56 = D.E. 156 170.90 165.00 15.90

62.92 = N.W. BY Cardona + Hill

0.54

63.46

12.17

51.29 T.P.

146.7

57.75

19.22

40.43 T.P.

420.1

4463-T

663-

4000 T.P.

518

15.18

4463 15.18
 = top of cb.
 40.00 36.50 35.00
 4.63 8.68 10.18
 1.88 6.18
 +38.4 14.00

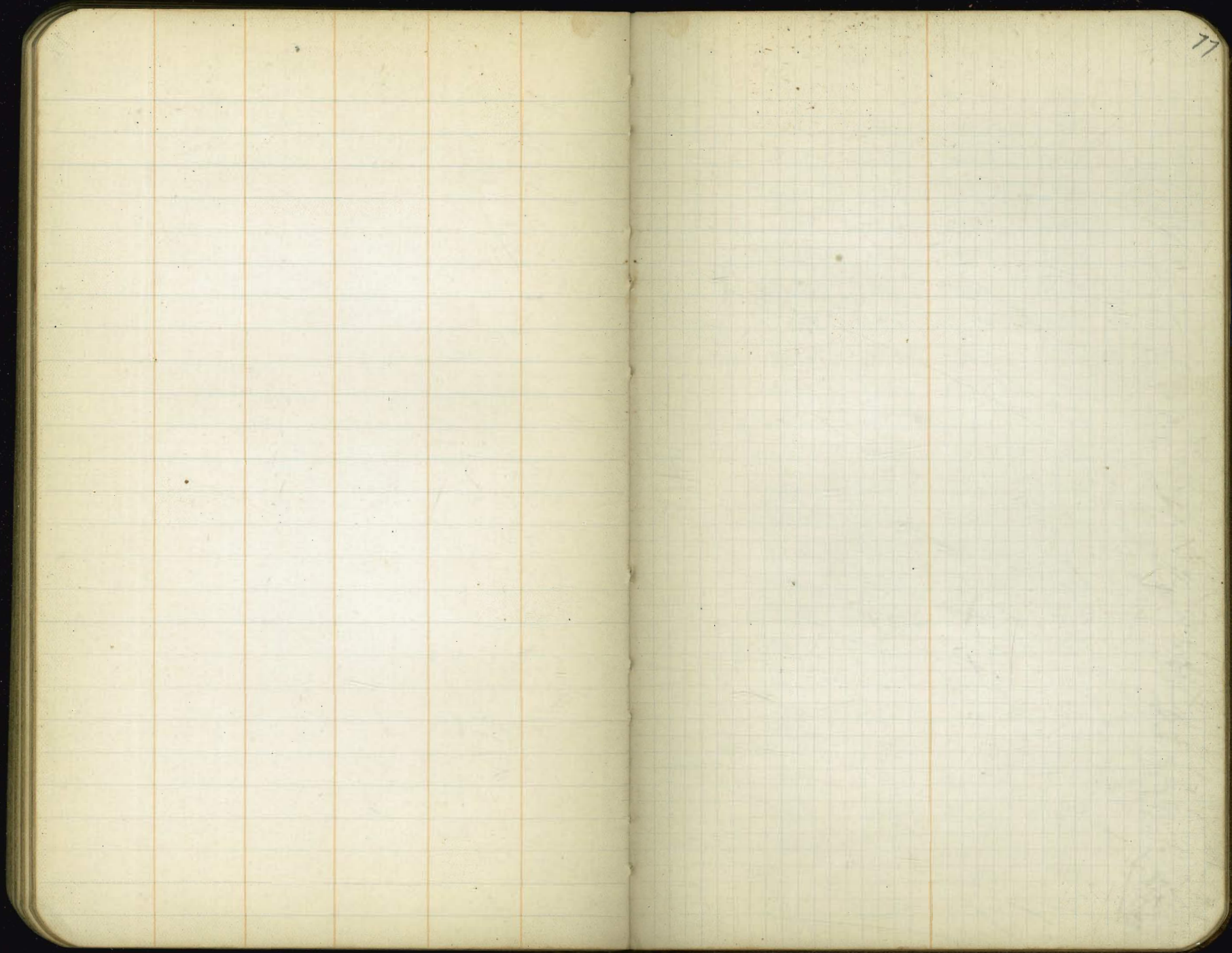
AZURE Vista Alley (BK 9)

Stations	Sta Grade	N.H. Sta	N.H. Grades
N.H. Grade = 0+00	136.00		135.01
+35.63	131.52		131.52
+85.63	125.20		125.20
1+35.63	118.88		118.88
+85.63	112.52		112.52
2+05.63 = BK	110.00		110.00
+32.29	107.14		107.14
+78.95	102.14		102.14
3+25.61	97.14		97.14
+45.63	95.00		95.00
+72.27	92.82		92.82
4+18.93	89.00		89.00
+65.6	85.16		85.16
+85.63 = BK	83.50		83.50
5+15.59	80.59		80.59
+65.59	75.74		75.74
6+15.59	70.89		70.89
6+53.15 = H.L. (over)	67.00		66.84

Stations same as South

13444 = SE B.M. Cornish + Monaco
152 +

136.76 = T	123.35	136.00	131.52	125.20	118.88	112.52	110.00	= BK
123.70 = TP	1.62 +	0.26	4.74	+0.26	6.06	17.42	2.87	
124.96 = T		cut H. 0.70 =	3.26	0.55	6.75	12.35	3.02	
			+13.8		-0.69	+0.07	-0.15	
123.15								BK
117.57 = TP	N.H. 125.01	121.52	125.20	118.88	112.52	110.00		
0.28 +	1.25	4.74	+0.26	6.06	12.42	2.87		
112.87 = T	cut H. = 1.20	3.26	0.55	6.75	11.88	1.88		
117.15		-1.02	-0.81	-0.60	7.044	+0.97		
100.16 = TP								
0.15 +	SL 107.14	102.14	97.14	95.00	92.82	89.00		
100.31 = T	5.73	10.73	3.17	5.31	7.49	11.31		
12.26	5.67	10.92	3.26	5.28	7.50	11.45		
87.91 = S	+0.06	-0.19	-0.07	+0.03	-0.01	-0.14		
0.20 +								
88.71 = T								
12.51	N.H. 107.14	102.14	97.14	95.00	92.82	89.00		
75.70 = TP	5.73	10.73	3.17	5.31	7.49	11.31		
0.72 +	5.21	10.33	2.71	4.49	6.23	7.96		
76.42 = T	+0.52	+0.20	+0.46	+0.62	+1.76	+1.35		
	SL 85.16	83.50	80.59	75.74	70.89	67.00		
	3.05	4.71	7.62	12.47	5.53	7.42		
	3.42	5.28	7.96	12.51	4.43	7.43 = cut H		
	-0.37	-0.57	-0.34	-0.04	+1.10			
	N.H. 85.16	82.50	80.59	75.74	70.89	66.84		
	3.05	4.71	7.62	12.47	5.53	9.58		
	2.04	3.75	7.14	10.77	2.98	3.70 = cut H		
	+1.01	+0.76	+0.48	+1.50	+2.55			



Darker
McHugh -
Sho. -
Sho.

BENCH MARKS
IN AZURE VISTA CORDOVA ST.

11-14-27

78

BM NE Top & Return	5.06	67.98	-	67.92	NE Cordova + Hill St
on Radius hub					10' Prop
T.P.	7.88	7534	0.52	67.46	NE Top Radius Slate
T.P.	4.72	7314	6.42	68.72	Monaco + Cordova
Chk. on BM SE. Cor. Carmelo + Cordova		3.18		69.96	NE Radius hub
TP	9.56	79.88	2.82	70.32	British + Cordova S.E. Radius hub
T.P.	11.68	87.19	4.87	75.51	Algeiras + Cordova
T.P.	12.15	99.23	0.11	87.08	NE 10' Radius Hub
T.P.	0.65	97.68	2.20	97.03	Carmelo + Cordova NE 10' Prop Radius Hub
T.P.	0.56	89.63	8.61	89.07	CRITAL + CORDOVA NE Radius hub
T.P.	0.60	77.60	12.63	77.00	Ladera + Cordova

SUNSET CLIFFS BND. B.M.'S

TP	3.28	68.41	12.97	65.13	NE Radius hub
TP	0.08	62.28	6.21	62.20	Sunset + Ladera
NE Radius hub Sunset + Carmelo		4.06		58.22 = B.M.	
TP	0.27	56.88	5.67	56.61	
TP	0.92	51.28	6.52	50.36	
TP	3.60	48.21	6.67	44.61	NE Radius hub
TP	12.84	54.76	6.29	21.92 = B.M. Sunset + Monaco	
TP	13.06	63.58	4.24	50.52	

TP NE. Cor. Cordova + Hill St.		0.65		62.93 =	
				62.92	
				0.01 in Error	
	13.11	76.03		62.92 = B.M. + Hill	

TP	12.37	88.24	0.16	75.87	BM on 2" x 2"
			7.29	80.95 =	Hub approx 5' S. side of 6" on Hill St
TP	14.35	100.43	0.66	87.58	
TP	12.87	112.77	0.51	99.92	

at E. end of Cordova about 200'

ENGINEERING DEPARTMENT,
CITY OF SAN DIEGO,
CALIFORNIA.

6163
35
76.63

60

To Frank Osburn Time _____

Date _____

WHILE YOU WERE OUT

M _____

of _____

Phone _____

TELEPHONED	PLEASE CALL
CALLED TO SEE YOU	WILL CALL AGAIN

Message Map No. - 1981

TIE-POINT SHEETS - 841, 844

Received by _____

FORM 70

24 34 60
77 30 30
137.10
4.0
6.35
22-

DIRECTIONS FOR USE OF TABLES

12536

50) 2.50 (.17
27
119
3400
113.41

ES

ENGINEERING DEPARTMENT,
CITY OF SAN DIEGO,
CALIFORNIA.

6163
35
28.63

24 02 45
77 39 30
77 00 30

137.10
4.0
6.35
2.2

DIRECTIONS FOR USE OF TABLES

12536
113.41

50) 8.50 (.17
27
119
113.41

Distance of stake from side or shoulder
stake for any widthway, 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 is given in feet and inches and distance
from side stake to slope stake. If ground is not

IMPROVED TABLES AND INFORMATION

To find Tangent and External for curve of
any other degree, divide by degree of curve and
add correction found in column of corrections.
Degree of curve with a given L may be found
by dividing tangent (or external), opposite L 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.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ 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.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I 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.

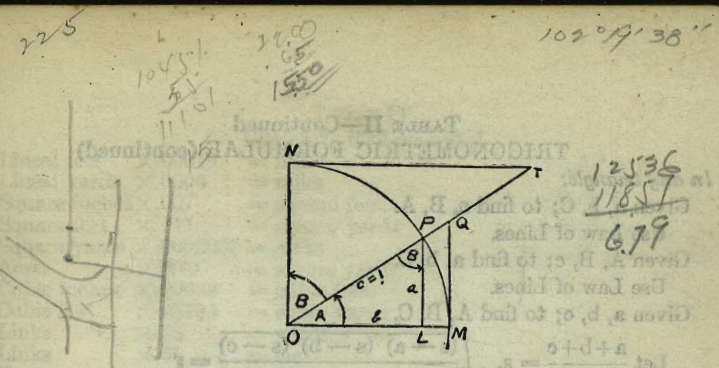


TABLE II
TRIGONOMETRIC FORMULÆ.

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \frac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \quad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Lines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$$

TABLE II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.

Use Law of Lines.

Given A, B, c; to find a, b, C.

Use Law of Lines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6} (B+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11
$\frac{1}{16}$	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219
$\frac{1}{8}$	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271
$\frac{3}{16}$	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323
$\frac{1}{4}$	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375
$\frac{5}{16}$	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427
$\frac{3}{8}$	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479
$\frac{7}{16}$	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531
$\frac{1}{2}$	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583
$\frac{9}{16}$	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635
$\frac{5}{8}$	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688
$\frac{11}{16}$	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740
$\frac{3}{4}$	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792
$\frac{7}{8}$	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844
$\frac{15}{16}$	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896
$\frac{1}{2}$	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.0000
	0	1	2	3	4	5	6	7	8	9	10	11

TABLE IV

USEFUL RELATIONS.

Lineal feet	X.00019	= miles
Lineal yards	X.0006	= miles
Square inches	X.007	= square feet
Square feet	X.111	= square yards
Square yards	X.0002067	= acres
Acres	X.4840	= square yards
Cubic inches	X.00058	= cubic feet
Cubic feet	X.03704	= cubic yards
Links	X.22	= yards
Links	X.66	= feet
Feet	X.15	= links

$$360^\circ = 21600' = 1296000''$$

$$\text{Radius} = \text{arc of } 57.2957790^\circ$$

$$\text{Arc of } 1^\circ (\text{radius} = 1) = .017453292$$

$$\text{Arc of } 1' (\text{radius} = 1) = .000290888$$

$$\text{Arc of } 1'' (\text{radius} = 1) = .000004848$$

$$\pi = 3.141592654$$

$$\sqrt{\frac{1}{4}} = 0.564190$$

$$\frac{\pi}{4} = 0.785398163$$

$$\sqrt[3]{\frac{6}{\pi}} = 1.240700982$$

$$\frac{\pi}{6} = 0.523598776$$

$$\pi^2 = 9.869604401$$

$$\sqrt{\frac{4}{\pi}} = 1.128379167$$

$$\frac{1}{\pi^2} = 0.101321184$$

$$\frac{\pi}{6} = 0.523598776$$

$$\sqrt{\pi} = 1.772453851$$

$$\frac{4\pi}{3} = 4.188790205$$

$$\frac{1}{\pi} = 0.3183099$$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in $11\frac{1}{2}$ miles

$$\text{Probable error of a single observation} = 0.6754 \sqrt{\frac{Mv^2}{n-1}}$$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULAE.

Horizontal Distance = $R - R \sin^2 a + C \cos a$

Vertical Distance = $R \frac{1}{2} \sin 2a + C \sin a$

$R = \text{Reading} \times \frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

South = 3336 ft
2-27-28 North 1.033 ft
dH = 7.303

467
467
2303
2368 (8093)

13548
12927
6.21

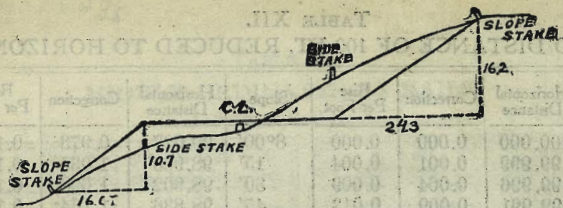
TABLE IX. TANGENTS AND EXTERNALS TO A 1° CURVE

I	T	E	I=70°	I	T	E	I=80°	I	T	E	I=90°
61°	3375.0	920.2	+	71°	4086.9	1308.2	+	81°	4898.6	1805.3	+
10'	3386.3	925.9	5° C.	10'	4099.5	1315.6	5° C.	10'	4908.0	1814.7	5° C.
20'	3397.5	931.6	T	20'	4112.1	1322.9	T	20'	4922.5	1824.1	T
30'	3408.8	937.3	.25	30'	4124.8	1330.3	.30	30'	4937.0	1833.6	.36
40'	3420.1	943.1	E	40'	4137.4	1337.7	E	40'	4951.5	1843.1	E
50'	3431.4	948.9	.080	50'	4150.1	1345.1	.110	50'	4966.1	1852.6	.149
62°	3442.7	954.8		72°	4162.8	1352.6		82°	4980.7	1862.2	
10'	3454.1	960.6		10'	4175.6	1360.1		10'	4995.4	1871.8	
20'	3465.4	966.5		20'	4188.5	1367.6		20'	5010.0	1881.5	
30'	3476.8	972.4		30'	4201.2	1375.2		30'	5024.8	1891.2	
40'	3488.3	978.3		40'	4214.0	1382.8		40'	5039.5	1900.9	
50'	3499.7	984.3		50'	4226.8	1390.4		50'	5054.3	1910.7	
63°	3511.1	990.2	10° C.	73°	4239.7	1398.0	10° C.	83°	5069.2	1920.5	10° C.
10'	3522.6	996.2	T	10'	4252.6	1405.7	T	10'	5084.0	1930.4	T
20'	3534.1	1002.3	.51	20'	4265.6	1413.5	.61	20'	5099.0	1940.3	.72
30'	3545.6	1008.3	E	30'	4278.5	1421.2	E	30'	5113.9	1950.3	E
40'	3557.2	1014.4	.159	40'	4291.5	1429.0	.220	40'	5128.9	1960.2	.299
50'	3568.7	1020.5		50'	4304.6	1436.8		50'	5143.9	1970.3	
64°	3580.3	1026.6		74°	4317.6	1444.6		84°	5159.0	1980.4	
10'	3591.9	1032.8		10'	4330.7	1452.5		10'	5174.1	1990.5	
20'	3603.5	1039.0		20'	4343.8	1460.4		20'	5189.3	2000.6	
30'	3615.1	1045.2		30'	4356.9	1468.4		30'	5204.4	2010.8	
40'	3626.8	1051.4		40'	4370.1	1476.4		40'	5219.7	2021.1	
50'	3638.5	1057.7	15° C.	50'	4383.3	1484.4	15° C.	50'	5234.9	2031.4	15° C.
65°	3650.2	1063.9	T	75°	4396.5	1492.4	T	85°	5250.3	2041.7	T
10'	3661.9	1070.2	.76	10'	4409.8	1500.5	.91	10'	5265.6	2052.1	1.09
20'	3673.7	1076.6	E	20'	4423.1	1508.6	E	20'	5281.0	2062.5	E
30'	3685.4	1082.9	.240	30'	4436.4	1516.7	.332	30'	5296.4	2073.0	.450
40'	3697.2	1089.3		40'	4449.7	1524.9		40'	5311.9	2083.5	
50'	3709.0	1095.7		50'	4463.1	1533.1		50'	5327.4	2094.1	
66°	3720.9	1102.2		76°	4476.5	1541.4		86°	5343.0	2104.7	
10'	3732.7	1108.6		10'	4489.9	1549.7		10'	5358.6	2115.3	
20'	3744.6	1115.1		20'	4503.4	1558.0		20'	5374.2	2126.0	
30'	3756.5	1121.7		30'	4516.9	1566.3		30'	5389.9	2136.7	
40'	3768.5	1128.2	20° C.	40'	4530.4	1574.7	20° C.	40'	5405.6	2147.5	20° C.
50'	3780.4	1134.8	T	50'	4544.0	1583.1	T	50'	5421.4	2158.4	T
67°	3792.4	1141.4	1.02	77°	4557.6	1591.6	1.22	87°	5437.2	2169.2	1.45
10'	3804.4	1148.0	E	10'	4571.2	1600.1	E	10'	5453.1	2180.2	E
20'	3816.4	1154.7	.321	20'	4584.8	1608.6	.445	20'	5469.0	2191.1	.603
30'	3828.4	1161.3		30'	4598.5	1617.1		30'	5484.9	2202.2	
40'	3840.5	1168.1		40'	4612.2	1625.7		40'	5500.9	2213.2	
50'	3852.6	1174.8		50'	4626.0	1634.4		50'	5517.0	2224.3	
68°	3864.7	1181.6		78°	4639.8	1643.0		88°	5533.1	2235.5	
10'	3876.8	1188.4		10'	4653.6	1651.7		10'	5549.2	2246.7	
20'	3889.0	1195.2	25° C.	20'	4667.4	1660.5	25° C.	20'	5565.4	2258.0	25° C.
30'	3901.2	1202.0	T	30'	4681.3	1669.2	T	30'	5581.6	2269.3	T
40'	3913.4	1208.9	1.28	40'	4695.2	1678.1	1.53	40'	5597.8	2280.6	1.83
50'	3925.6	1215.8	E	50'	4709.2	1686.9	E	50'	5614.2	2292.0	E
69°	3937.9	1222.7	.403	79°	4723.2	1695.8	.558	89°	5630.5	2303.5	.756
10'	3950.2	1229.7		10'	4737.2	1704.7		10'	5646.9	2315.0	
20'	3962.5	1236.7		20'	4751.2	1713.7		20'	5663.4	2326.6	
30'	3974.8	1243.7		30'	4765.3	1722.7		30'	5679.9	2338.2	
40'	3987.2	1250.8		40'	4779.4	1731.7		40'	5696.4	2349.8	
50'	3999.5	1257.9		50'	4793.6	1740.8		50'	5713.0	2361.5	
70°	4011.9	1265.0	30° C.	80°	4807.7	1749.9	30° C.	90°	5729.7	2373.3	30° C.
10'	4024.4	1272.1	T	10'	4822.0	1759.0	T	10'	5746.3	2385.1	T
20'	4036.8	1279.3	1.54	20'	4836.2	1768.2	1.84	20'	5763.1	2397.0	2.20
30'	4049.3	1286.5	E	30'	4850.5	1777.4	E	30'	5779.9	2408.9	E
40'	4061.8	1293.6		40'	4864.8	1786.7		40'	5796.7	2420.9	
50'	4074.4	1300.9	.485	50'	4879.2	1796.0	.671	50'	5813.6	2432.9	.910

T = R tan 1/2 I E = R exsec 1/2 I

TABLE IX. TANGENTS AND EXTERNALS TO A 1° CURVE

I	T	E	I=100°	I	T	E	I=110°	I	T	E	I=120°
91°	5830.5	2444.9	+	101°	6950.6	3278.1	+	111°	8336.7	4386.1	+
10'	5847.5	2457.1	5° C.	10'	6971.3	3294.1	5° C.	10'	8362.7	4407.6	5° C.
20'	5864.6	2469.3	T	20'	6992.0	3310.1	T	20'	8388.9	4429.2	T
30'	5881.7	2481.5	.43	30'	7012.7	3326.1	.51	30'	8415.1	4450.9	.62
40'	5898.8	2493.8	E	40'	7033.6	3342.3	E	40'	8441.5	4472.7	E
50'	5916.0	2506.1	.200	50'	7054.5	3358.5	.268	50'	8468.0	4494.6	.360
92°	5933.2	2518.5		102°	7075.5	3374.9		112°	8494.6	4516.6	
10'	5950.5	2531.0		10'	7096.6	3391.2		10'	8521.3	4538.8	
20'	5967.9	2543.5		20'	7117.8	3407.7		20'	8548.1	4561.1	
30'	5985.3	2556.0		30'	7139.0	3424.3		30'	8575.0	4583.4	
40'	6002.7	2568.6		40'	7160.3	3440.9		40'	8602.1	4606.0	
50'	6020.2	2581.3	10° C.	50'	7181.7	3457.6	10° C.	50'	8629.3	4628.6	10° C.
93°	6037.8	2594.0	T	103°	7203.2	3474.4	T	113°	8656.6	4651.3	T
10'	6055.4	2606.8	.36	10'	7224.7	3491.3	.103	10'	8684.0	4674.2	.125
20'	6073.1	2619.7	E	20'	7246.3	3508.2	E	20'	8711.5	4697.2	E
30'	6090.8	2632.6	.401	30'	7268.0	3525.2	.536	30'	8739.2	4720.3	.721
40'	6108.6	2645.5		40'	7289.8	3542.4		40'	8767.0	4743.6	
50'	6126.4	2658.5		50'	7311.7	3559.6		50'	8794.9	4766.9	
94°	6144.3	2671.6		104°	7333.6	3576.8		114°	8822.9	4790.4	
10'	6162.2	2684.7		10'	7355.6	3594.2		10'	8851.0	4814.1	
20'	6180.2	2697.9		20'	7377.8	3611.7		20'	8879.3	4837.8	
30'	6198.3	2711.2		30'	7399.9	3629.2		30'	8907.7	4861.7	
40'	6216.4	2724.5		40'	7422.2	3646.8		40'	8936.3	4885.7	
50'	6234.6	2737.9	15° C.	50'	7444.6	3664.5	15° C.	50'	8965.0	4909.9	15° C.
95°	6252.8	2751.3	T	105°	7467.0	3682.3	T	115°	8993.8	4934.1	T
10'	6271.1	2764.8	1.30	10'	7489.6	3700.2	1.56	10'	9022.7	4958.6	1.93
20'	6289.4	2778.3	E	20'	7512.2	3718.2	E	20'	9051.7	4983.1	E
30'	6307.9	2792.0	.604	30'	7534.9	3736.2	.806	30'	9080.9	5007.8	1.09
40'	6326.3	2805.6		40'	7557.7	3754.4		40'	9110.3	5032.6	
50'	6344.8	2819.4		50'	7580.5	3772.6		50'	9139.8	5057.6	
96°	6363.4	2833.2		106°	7603.5	3791.0		116°	9169.4	5082.7	
10'	6382.1	2847.0		10'	7626.6	3809.4		10'	9199.1	5107.9	
20'	6400.8	2861.0		20'	7649.7	3827.9		20'	9229.0	5133.3	
30'	6419.5	2875.0		30'	7672.9	3846.5		30'	9259.0	5158.8	
40'	6438.4	2889.0	20° C.	40'	7696.3	3865.2	20° C.	40'	9289.2	5184.5	20° C.
50'	6457.3	2903.1	T	50'	7719.7	3884.0	T	50'	9319.5	5210.3	T
97°	6476.2	2917.3	1.74	107°	7743.2	3902.9	2.08	117°	9349.9	5236.2	2.52
10'	6495.2	2931.6	E	10'	7766.8	3921.9	E	10'	9380.5	5262.3	E
20'	6514.3	2945.9	.809	20'	7790.5	3940.9	1.08	20'	9411.3	5288.6	1.46
30'	6533.4	2960.3		30'	7814.3	3960.1		30'	9442.2	5315.0	
40'	6552.6	2974.7		40'	7838.1	3979.4		40'	9473.2	5341.5	
50'	6571.9	2989.2		50'	7862.1	3998.7		50'	9504.4	5368.2	
98°	6591.2	3003.8		108°	7886.2	4018.2		118°	9535.7	5395.1	
10'	6610.6	3018.4		10'	7910.4	4037.8		10'	9567.2	5422.1	
20'	6630.1	3033.1	25° C.	20'	7934.6	4057.4	25° C.	20'	9598.9		



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 05	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

Computed by L. Leland Locke.

179 61
 132 34
 47 27
 400
 371
 09
 4463
 91
 5.5

20
 92
 112
 58
 67

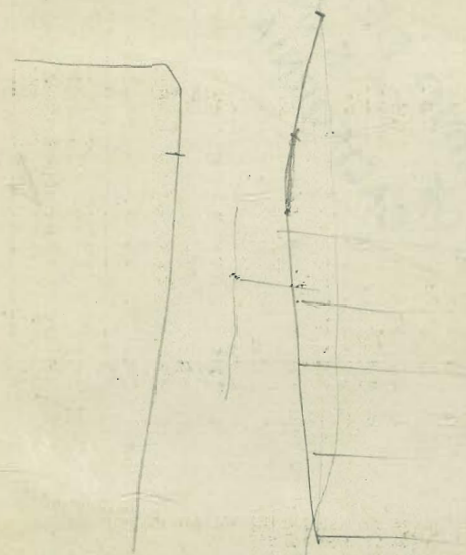
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 69
 11

18+55
 1512
 67

18+55
 1512
 19+75

9389
 675
 8714

8618
 8765
 15128
 87.09



54
8
8.2 = H.I.

3N = North
0232 = South
3.72
1.66
5.38
15' 30" E

508
95
603
6957
1937 = North
5.024

190
1100
18.5
18.5
5770 + 20" E
5130 32' 05" E
Δ 63° 41' 15"

3670

ENGINEERING DEPARTMENT,
CITY OF CALIFORNIA,
SAN DIEGO.

15+75
15+40
14+75
14+25:26

65635
1543
5.0205
5188
0.168

281.05
53.41
328.50
17.09
17.09
17.09
17.09
17.09

5.8 H.I.

5.1
2.5
7.6
7.8
2.4
9.9

38.57
1.87
3670
13205 = North
0.21
0.2905
4.594
4.8845
all = South

1003 = North
75.51
4.88
5.88
7.20

14410
16624
7.82
15434
5.24
8.06
7.96

2012
1820
18.30
3/1020 1938
3406.33
6813.05
1022 19 38

21697
17678
40.19

6432
31.5
30.9
65635
5029
1.5345
1903 = North
6.952
5.022
4.738
5.029
9.767

2012
182
4
13575
297
13278

6553 = South
723
337
1.12

2012
1232
114
1347

54.01
93.38
137.56

420
390
810
405
39
1800

876
772
17992
38.96

73.12
32
7632
514
8176 = T
7440
336
64
3.1

5.14
3.6
8.62
23
6.34

8.64
6.6
2.04

595 = North
0.02 = South
593
467
1060