1626

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

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

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

1626

CITY ENGINEER

Mission Valley Trunk Sewer

3

≠Note: This Location Abandoned from 0+00 to East of 6th St. See FB. 1640

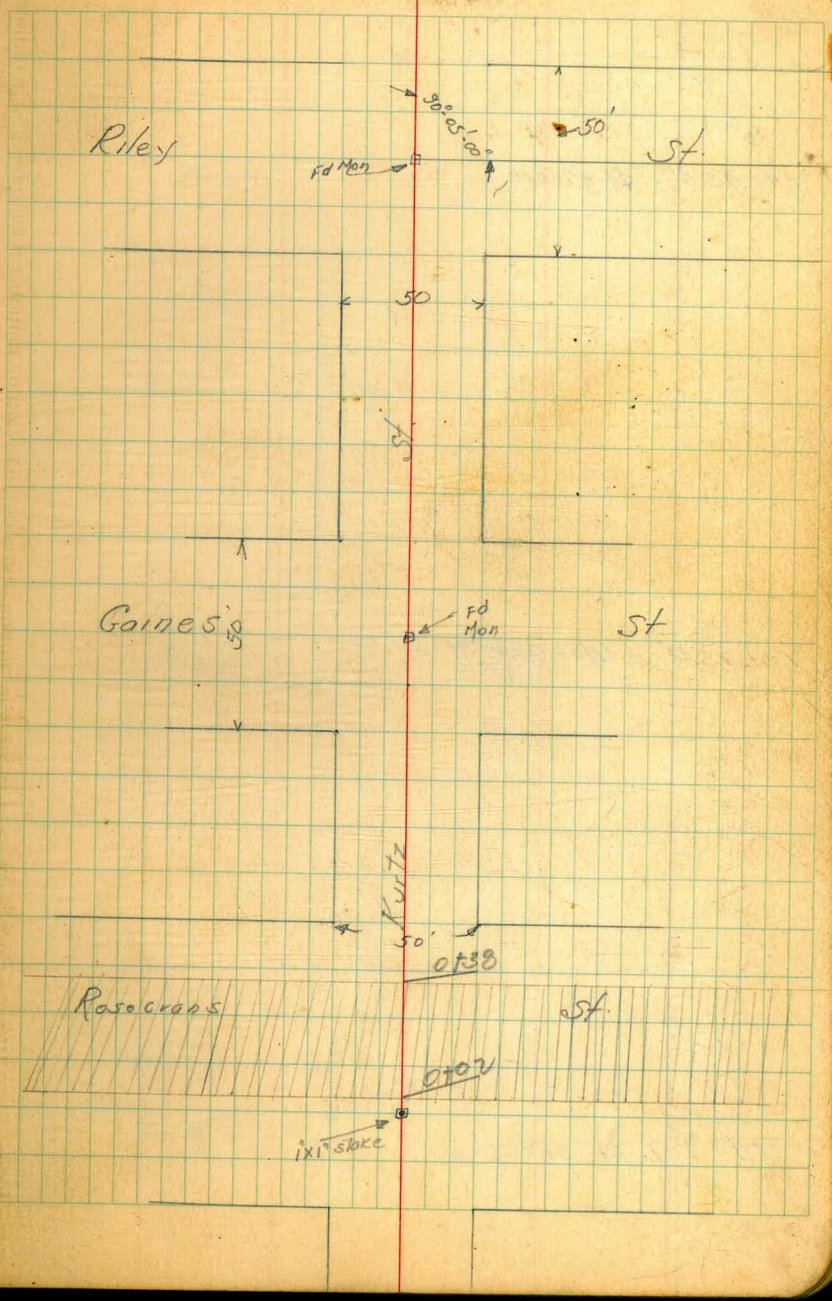
7+45 01 L Rt 90°-05'-00

3+35 07 ℄ Gaines

0+00 = 42+48 Pt Loma Sewer See FB. 1623

indexed
c.SK.

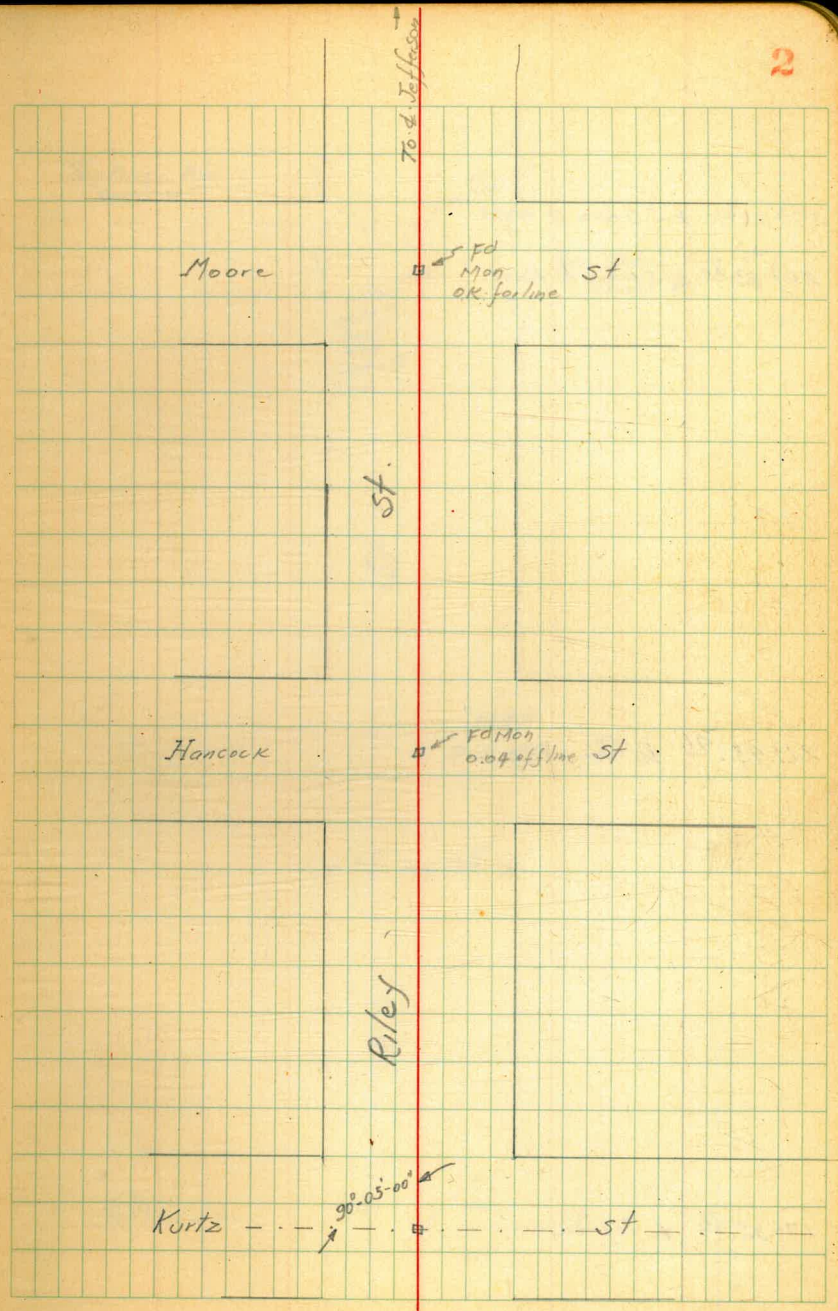
1



14+45.20 ℄ Moore

10+95.19 ℄ Hancock St

7+45.01 L. Rt 90°-05'-00

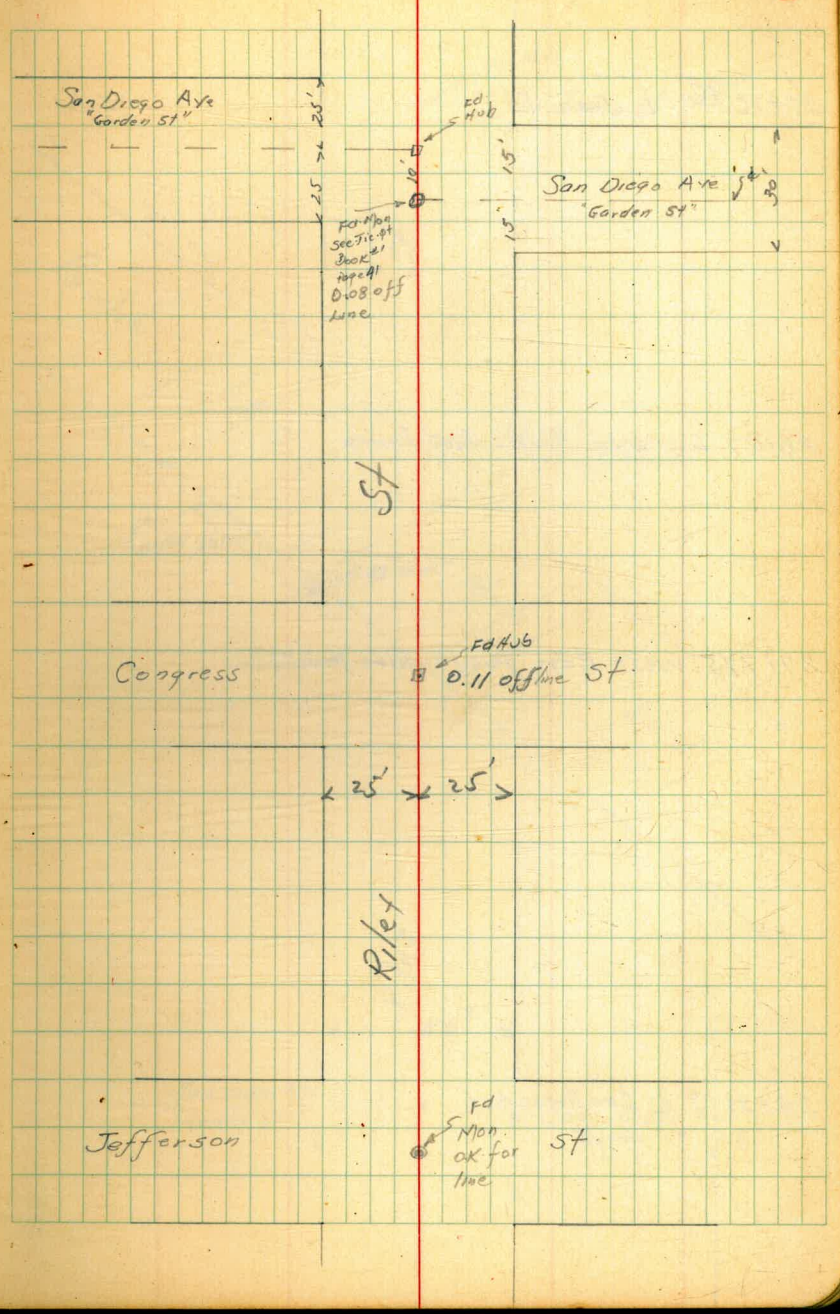


29+95.20 ℄ S.D.Ave to West

29+85.20 ℄ S.D.Ave to East

21+45.41 ℄ Congress

17+95.32 ℄ Jefferson

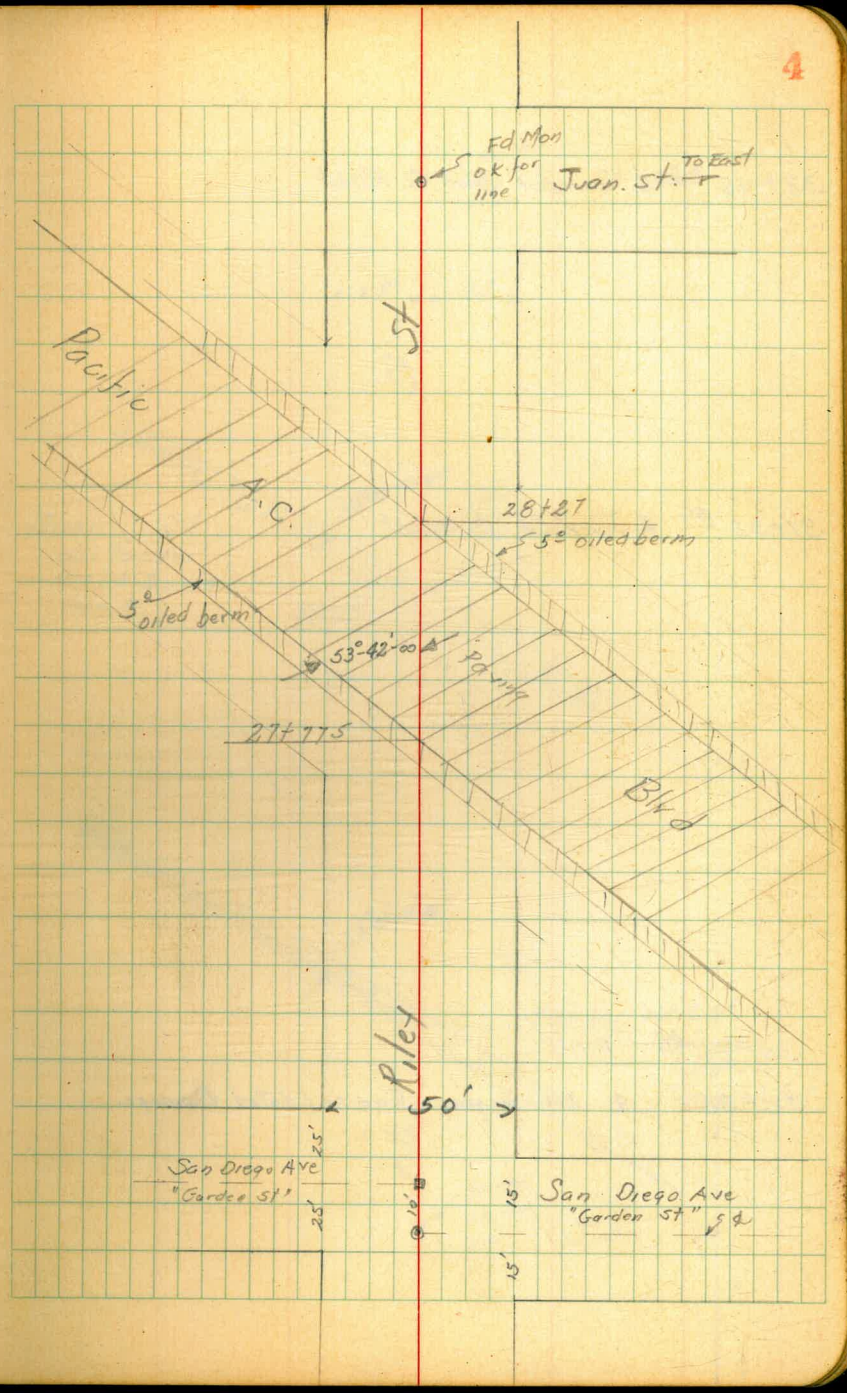


30+15.46 ℄ Juan St.

28+27 East Edge Pacific Blvd Paving

27+775 West Edge Pacific Blvd Paving

24+95.20 ℄ San Diego Ave

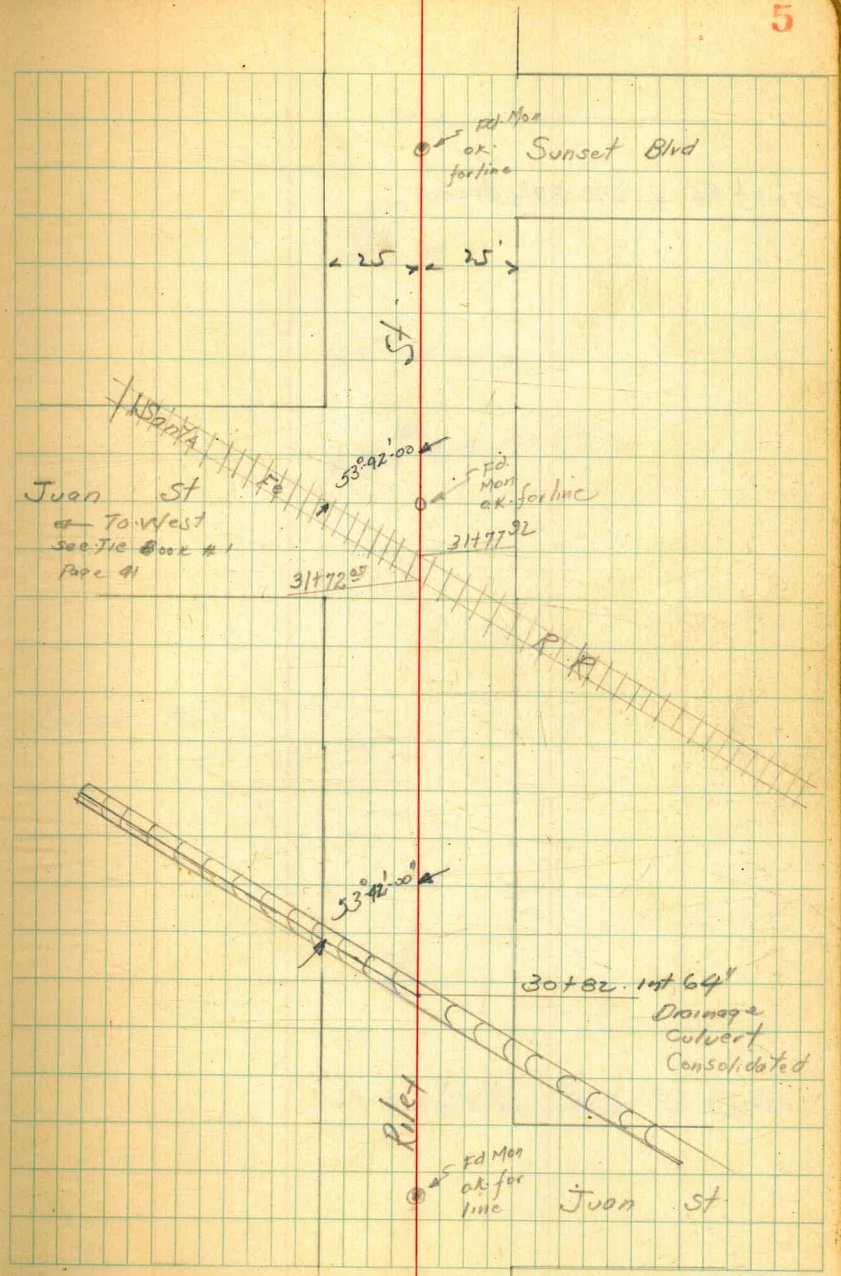


33+65.63 ℄ Sunset Blvd to East

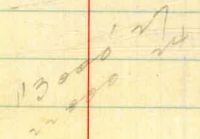
31+95.86 ℄ Juan St to West

30+82.44 P.O.T.

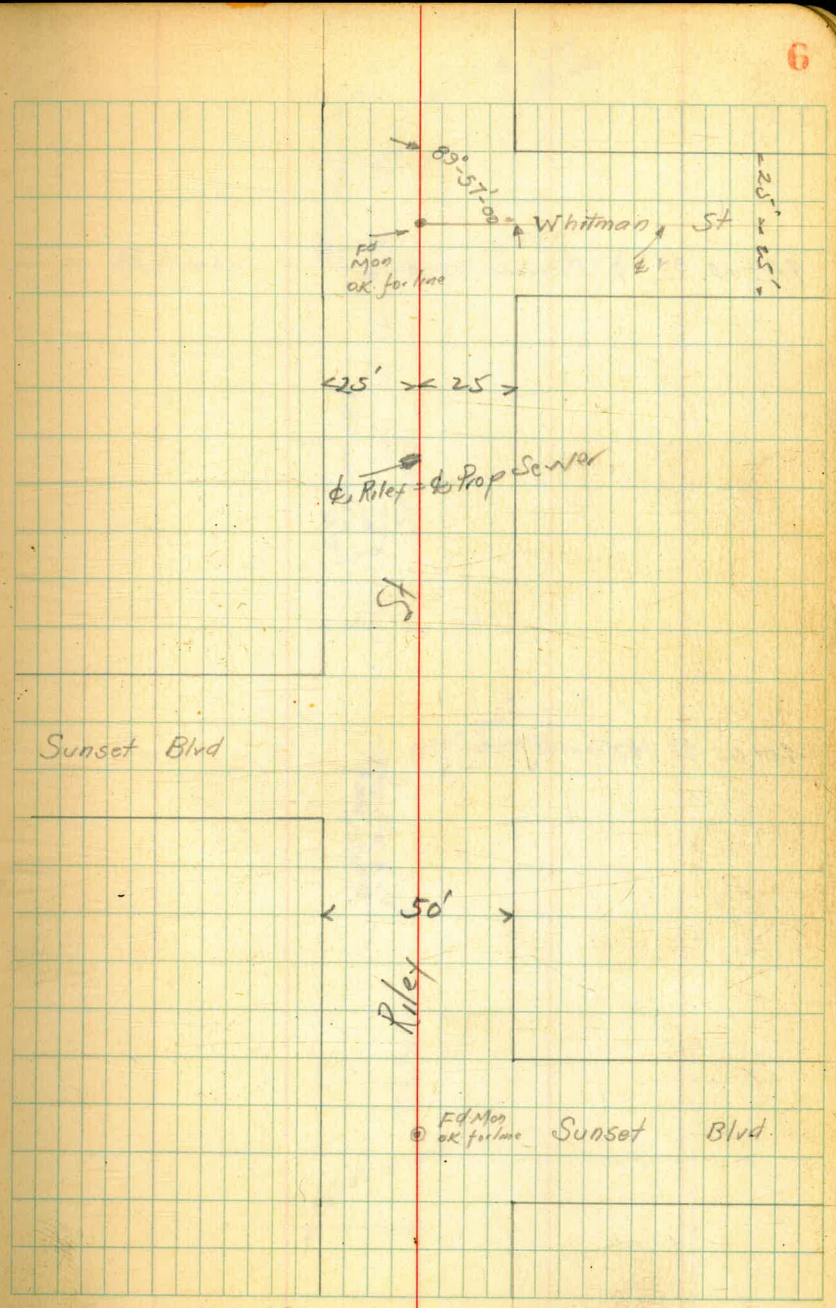
30+82 ℄ 64" pipe Consolidated Drainage



37+15.83 L Rt 89°-57'-00"

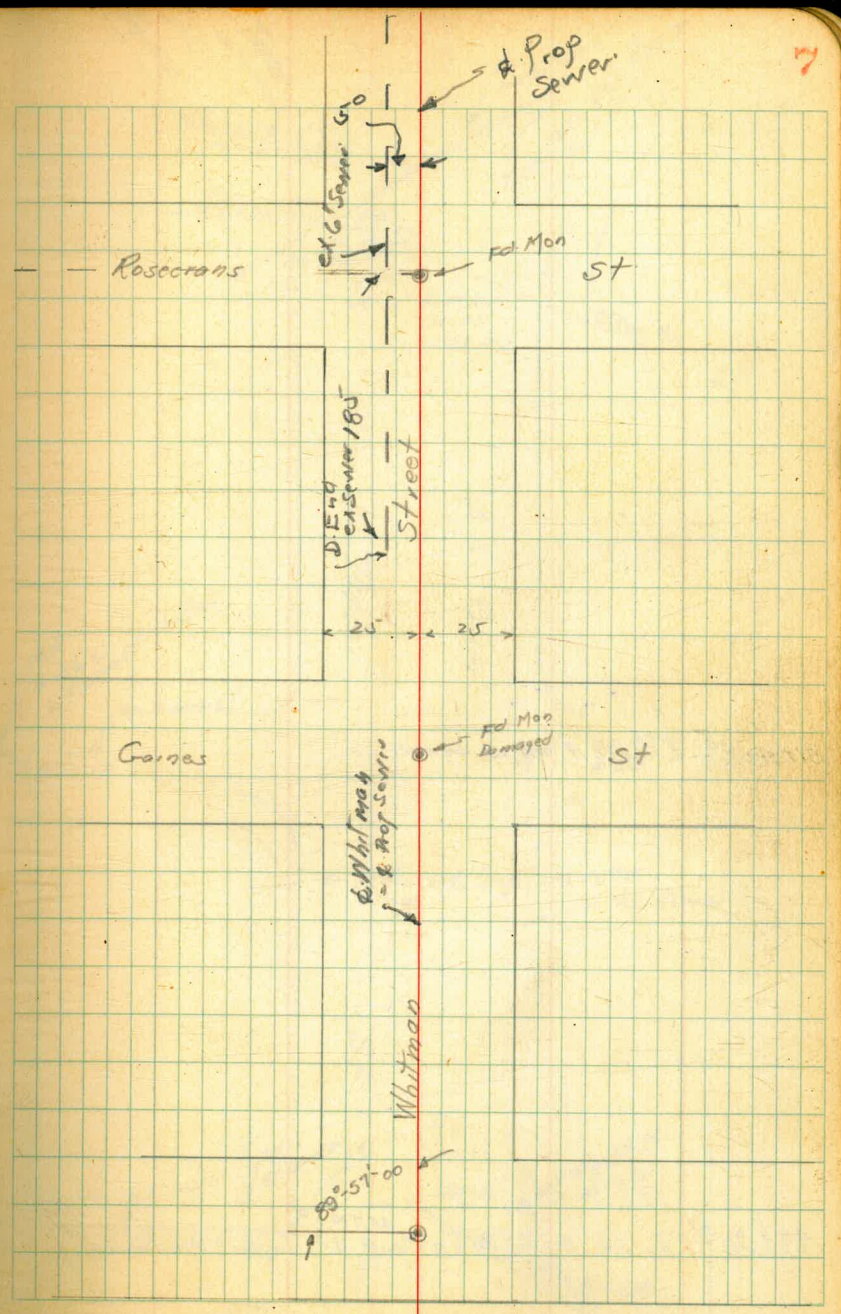


33+65 ℄ ℄ Sunset Blvd to East



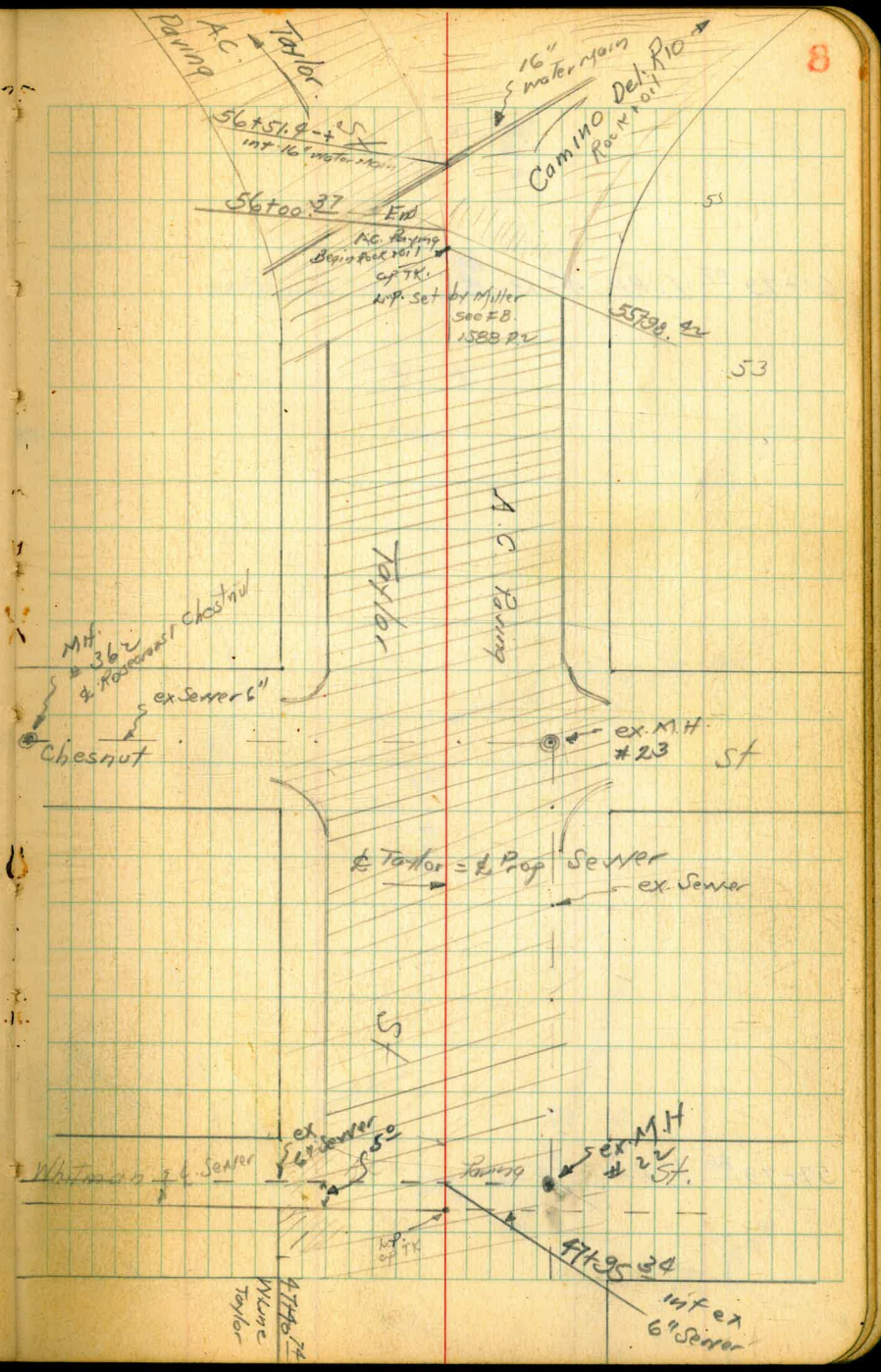
44+15.83 ℄ Rosecrans or Scott

40+65.83 ℄ Gaines



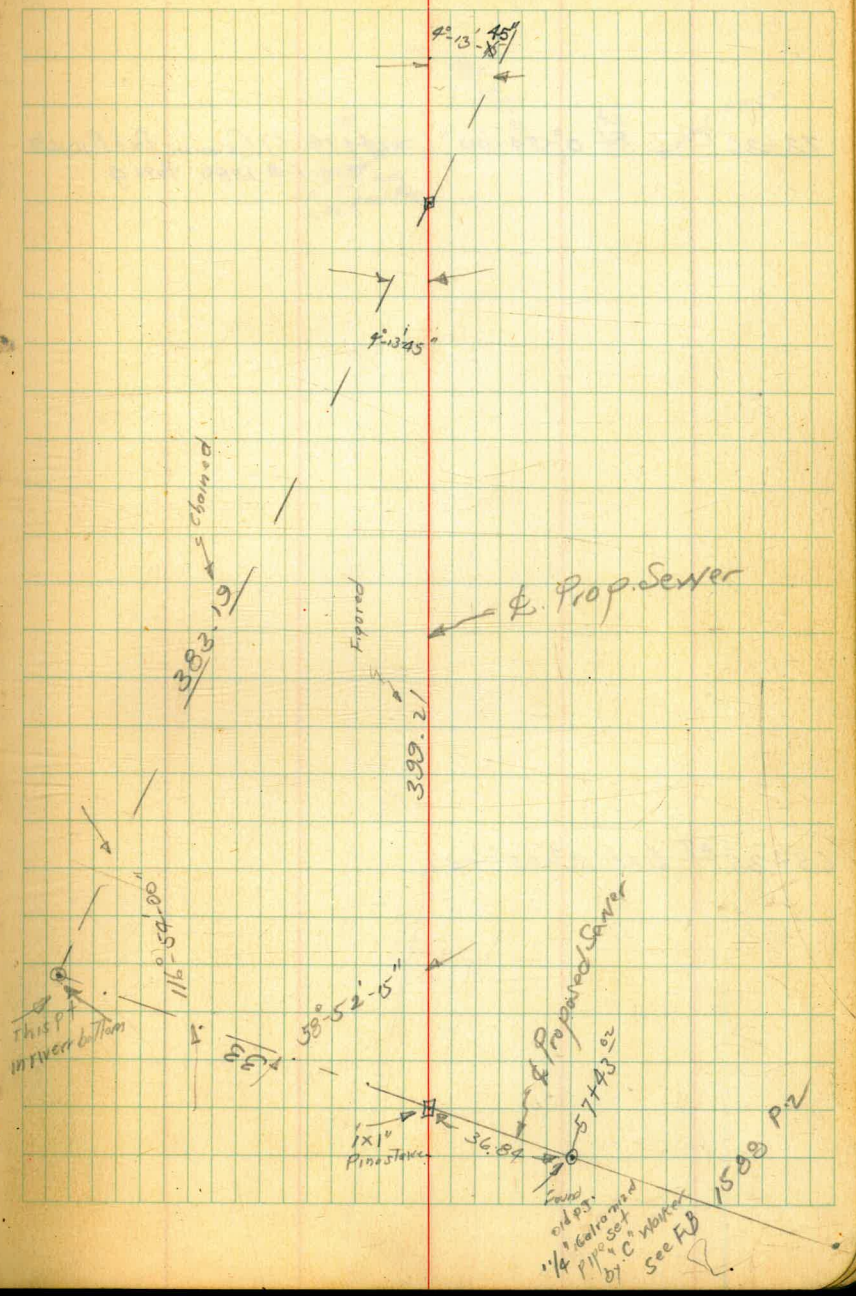
51+40.39 +- ℄ Chesnut int ex. Sewer

47+90.39 L. Lt 89°-57'-30 cp TK L.P. ℄s. Taylor + Whitman



61+79 OT L. Rt 4°-13'-45" 1"x1" pine stake

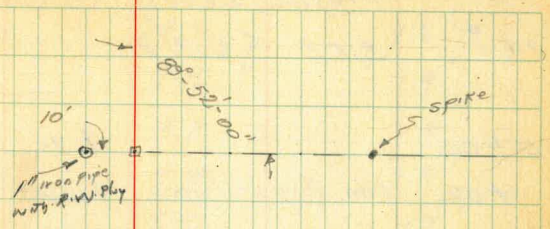
57+79 86 L. Rt 58°-52'-15"



Continued on Page 37.

72+26.76 L. ~~Rt.~~ Lt. 0°-54'-00" = 14774.57 Camino Del Rio sta
See FB 1588 Page 9

65+25.07 L. Lt. 2°-05'-00"



3/3/47 Reduced & checked J.P.M.

Profile Levels. Mission Valley Sewer

B.M. #1	5.05	⟨6.71⟩		⟨1.66⟩	Mon. & Kurtz & Taylor
0+00			4.2	2.5	
+02	Edge Rock + Oil Paving		4.12	2.59	
0+20	" " " "		3.97	2.74	
0+38	W. Edge of Paving		4.11	2.60	
0+50			4.3	2.4	
1+00			4.7	2.0	
+50			4.9	1.8	
2			5.2	1.5	
+50			5.5	1.2	
T.P.	5.40	⟨6.57⟩	5.54	⟨1.17⟩	
3			5.6	1.0	
+50			5.1	1.5	
+95.07	℄ Gomes on Ground		5.1	1.5	
4			5.0	1.6	
+50			4.8	1.8	
5			4.9	1.7	
+50			4.8	1.8	
6			5.0	1.6	
+50			5.1	1.5	
7			5.0	1.6	
+45.01	L Rt on Monument		5.04	1.53	
Set B.M. #2	3.25	⟨6.74⟩	3.08	⟨3.49⟩	R.R. Spike in Power Pole #3155 204+5+70
+61			5.2	1.5	

⟨6.74⟩

8		4.9	1.8	
+50		4.8	1.9	
9		4.3	2.4	
+50		4.8	1.9	
10		5.0	1.7	
+50		4.4	2.3	
+95.19	℄ Hancock on Mon	4.45	⟨2.29⟩	
T.P.	5.19 ⟨7.48⟩	4.45	⟨2.29⟩	
+38		5.5	2.0	
11+01		4.4	3.1	
+50		4.4	3.1	
12		4.6	2.9	
+50		4.8	2.7	
13		4.6	2.9	
+50		4.5	3.0	
14		4.2	3.3	
+30		4.3	3.2	
+34		5.1	2.4	
+45.30	℄ Moore	4.7	2.8	
Set B.M. #3	2.99 ⟨8.72⟩	1.75	⟨5.73⟩	N.E. Top Mr. Moore + Riky
15		5.6	3.1	
+50		5.4	3.3	
16		5.5	3.2	
+50		5.0	3.7	
17		4.9	3.8	

		〈8.72〉		
17+50			4.7	4.0
+80			5.0	3.7
+95.32	℄ Jefferson Hub		5.29	〈3.43〉
" "	Ground.		4.9	3.8
18			5.0	3.7
+50			4.6	4.1
19			4.3	4.4
+50			4.5	4.2
20			4.5	4.2
T.P.	3.65	〈7.73〉	4.64	〈4.08〉
+50			3.5	4.2
21			3.0	4.7
+35			3.3	4.4
+46.41	℄ Congress		3.6	4.1
+60			3.4	4.3
22			4.9	2.8
+25			5.9	1.8
+50			6.4	1.3
23			7.0	0.7
+50			6.4	1.3
24+00			5.6	2.1
T.P.	3.73	〈7.77〉	3.69	〈4.04〉
+50			5.3	2.5
+85.20	℄ 50 Ave to East on Mon		5.77	2.00
+95.20			5.2	2.6

〈7.77〉

25+50		5.0	2.8
26		5.2	2.6
+50		5.4	2.4
27		4.8	3.0
+25		4.2	3.6
+50		2.6	5.2
+65		1.6	6.2
+77.5	W Edge Pacific Blvd Paving	1.27	〈6.50〉
28+03.7	℄ Pacific Blvd Paving	0.82	〈6.95〉
28+27	E Edge Pacific "	0.81	〈6.96〉
+40		1.0	6.8
+50		0.7	7.1
+70		2.0	5.8
29+00		1.9	5.9
+50		2.5	5.3
30		2.6	5.2
+15.46	℄ Juan St. Ground	2.0	5.8
T.P. on Mon	9.45 〈14.08〉	3.14	〈4.63〉
+30		8.7	5.4
+40		5.5	8.6
+61		5.5	8.6
+70		6.5	7.6
30+82	Inf 64" culvert. Top	5.55	〈8.53〉
+82.41	R.O.T. on Stake	3.32	10.76

		⟨14.08⟩		
+86		3.2	10.9	✓
+95		8.9	5.2	✓
31		9.7	4.4	✓
+15		10.8	3.3	✓
+50	Toe A.T.&S.F.R.R.	9.6	4.5	✓
+63		5.0	9.1	✓
+67		4.4	9.7	✓
+71		2.9	11.2	✓
+72 85	Gage W. Rail/ Santa Fe Top Rail	2.38	11.70	✓
+77 92	" E " " " Top Rail	2.34	11.74	✓
+85		4.4	9.7	✓
+92		4.8	9.3	✓
31+95.86	Mon. & Juan to West	6.93	7.15	✓
32		8.0	6.1	✓
+04	Toe Santa Fe R.R.	8.9	5.2	✓
+37		10.1	4.0	✓
+50		8.9	5.2	✓
+90		10.0	4.1	✓
33+00		9.5	4.6	✓
+50		9.3	4.8	✓
+65 63	& Sunset on Mon	9.83	4.25	✓
TP.	5.41 ⟨10.31⟩	9.18	⟨4.90⟩	✓
34		5.1	5.2	✓
+50		5.3	5.0	✓
35		5.1	5.2	✓

		⟨10.31⟩		
35+50		4.9	5.4	✓
36		4.7	5.6	✓
+50		5.2	5.1	✓
37		6.0	4.3	✓
+15.83 L.R.	& Blvd. & Whitman. Grd	5.8	4.5	✓
" " " "	on con Mon	6.55	⟨3.76⟩	✓
T.P. 7.08	⟨10.84⟩	6.55	⟨3.76⟩	✓
+50		6.8	4.0	✓
38		6.2	4.6	✓
+50		5.7	5.1	✓
39		5.3	5.5	✓
+50		4.9	5.9	✓
40		4.7	6.1	✓
+50		4.4	6.4	✓
+65 83	& Grimes on Ground	4.3	6.5	✓
41		4.2	6.6	✓
+50		4.5	6.3	✓
42		4.5	6.3	✓
+50		4.5	6.3	✓
T.P. 4.29	⟨11.13⟩	4.00	⟨6.84⟩	✓
43		4.8	6.3	✓
+50		4.6	6.5	✓
44		4.4	6.7	✓
+15 83	& Rosecrans or Scott	4.3	6.8	✓
" "	on Hub setover Mon	4.59	⟨6.54⟩	✓

		⟨11.13⟩			
44+50			4.4	6.7	
45			4.7	6.4	
+50			4.9	6.2	
46			4.9	6.2	
+50			4.7	6.4	
47			4.6	6.5	
+90 74	Wl Edge Paving Taylor St		4.71	6.42	
BM	2.56	⟨11.57⟩	2.12	⟨9.01⟩	SW Top Hy Whitmarsh Taylor
+66 74	Wcb Taylor		5.60	5.97	
+75			5.05	6.52	
+90 34	L. & Whitmarsh Taylor	L.P. Cork.	4.81	6.76	
48			4.75	6.82	
+15			4.72	6.85	
+50			4.61	6.96	
49			4.46	7.11	
+50			4.30	7.27	
50			4.18	7.39	
+50			4.03	7.54	
51			3.90	7.67	
+90 34	& Chesnut mit ex Sewer		3.37	8.20	
" "	Rim ex MH	25' East of ℄ Taylor see Grade Book 132 p.74	3.81	7.76	
" "	Flow Line				
" "	Rim ex MH		5.08	6.49	
" "	" Flow Line	M.H. & Rosecrans			
TP	7.36	⟨15.12⟩	3.81	⟨7.76⟩	

		⟨15.12⟩			57+43 ± P.P.
52			5.90	⟨9.22⟩	
+50			4.94	10.18	
53			3.93	11.19	
+50			2.94	12.18	
54			2.01	13.11	
+50			1.02	14.10	
T.P.	8.22	⟨22.15⟩	1.19	⟨13.93⟩	
55			6.95	15.20	
+50			5.76	16.39	
56			4.63	17.52	
56+00.37	End AC Paving	Boom Rock + Oil	4.61	17.54	
+30			4.66	17.49	
+50			5.04	17.11	
57+00			5.33	16.82	
+20	Edge Rock + Oil Paving		5.2	17.0	
+25			4.8	17.4	
+33			6.7	15.5	
check BM.	South End old Town Bridge		2.15	⟨20.00⟩	
				20.05	
				0.07 error	
	Corrected to old Town BM.				
2.15		⟨22.22⟩		⟨20.07⟩	
TP	6.56	⟨21.22⟩	7.56	⟨19.66⟩	
+50			7.2	14.0	
+60			8.3	12.9	
+69			12.3	8.9	
+79 86	L. Rl		14.4	6.8	
" "	9' Lt		19.8	1.4	

		〈21.22〉			
58			13.1	8.1	✓
" "	6'Lt		14.9	6.3	✓
" "	9 "		19.6	1.6	✓
" +25			13.5	7.7	✓
"	5 Rt		12.5	8.7	✓
"	2 Lt		15.7	5.5	✓
"	7 Lt		19.2	2.0	✓
				4.2	✓
" +50			17.0	14" willow on ⊕	
"	3 Rt		12.8	8.4	✓
"	4 Lt		19.4	1.8	✓
+75			16.0	5.2	✓
"	5 Rt		11.2	10.0	✓
"	5 Lt		19.6	1.6	✓
59+00			14.8	6.4	✓
" "	5 Rt		9.8	11.4	✓
" "	7 Lt		16.0	5.2	✓
" "	10 Lt		19.2	2.0	✓
+25			13.5	7.7	✓
"	1 Rt		10.4	10.8	✓
"	5 Rt		9.5	11.7	✓
"	6 Lt		16.0	5.2	✓
"	12 Lt		19.0	2.2	✓
+50			16.4	4.8	✓
"	5 Rt		10.9	10.8	✓

		〈21.22〉		
59+50 - 7' Lt			22.00	- 0.8 ✓
+75			14.8	+ 6.4 ✓
" 5 Rt			10.8	10.4 ✓
" 7 Lt.			19.6	1.6 ✓
60+00			14.9	6.3 ✓
" 5 Rt			10.0	10.6 ✓
" 5 Lt			20.0	1.2 ✓
+25			16.3	4.9 ✓
" 5 Rt.			12.3	8.9 ✓
" 4 Lt.			18.9	2.3 ✓
+50			16.1	5.1 ✓
" 5 Rt			12.1	9.1 ✓
" 2 Lt			20.0	1.2 ✓
TP 6.56		〈21.22〉 ✓	6.56	〈14.66〉 ✓
TP 0.46		〈9.60〉 ✓	12.08	〈9.14〉 ✓
+75			5.8	3.8 ✓
" 5' Rt			1.8	7.8 ✓
" 6 Lt			8.3	1.3 ✓
61+00			7.2	2.4 ✓
" 5' Rt			4.4	5.2 ✓
" 5 "			8.6	1.0 ✓
+50			8.1	1.5 ✓
+ 79 ° 2. Rt			6.65	〈2.95〉 ✓
TP on L. 327		〈12.22〉 ✓	6.65	〈2.95〉 ✓
62			8.8	3.4 ✓
" 5' Rt			7.5	4.7 ✓

		〈12.22〉	
'+40 Toe fill	8.9	3.3	✓
" 5' Rt	6.8	5.4	✓
+50	8.2	4.0	✓
" 5 Rt	5.7	6.5	✓
" 5' Lt toe fill	10.4	1.8	✓
63	7.1	5.1	✓
5 Rt	3.8	8.4	✓
7' Lt Toe fill	10.6	1.6	✓
+93 7" palm 2' Lt			
+50	5.3	6.9	✓
5' Rt	2.2	10.0	✓
7' Lt Toe Highway fill	9.6	2.6	✓
+85'	5.6	6.6	✓
" 5' Rt	2.5	9.7	✓
" 2' Lt Toe fill	6.8	5.4	✓
64	4.9	7.3	✓
" 5' Rt	2.6	9.6	✓
" 6' Lt Toe fill	6.7	5.5	✓
+50	3.8	8.4	✓
" 5' Rt	0.7	11.5	✓
" 6 Lt	6.4	5.8	✓
65	1.3	10.9	✓
" 5 Rt	+1.6	13.8	✓
" 10 Lt	3.0	9.2	✓
T.P. 5.98 〈18.19〉	0.01	〈12.21〉	

		〈18.19〉	
65+05. 30" Bot. Palm 3.5 Lt to Ctr			
65+05.	5.7	12.5	✓
+11	5.9	12.3	✓
+25 07 Lt Lt on stake	8.32	9.87	✓
+46 21" pepper Tree 5' Rt thicket			
+50	8.9	9.8	✓
+70	8.4	9.8	✓
+75	10.9	7.3	✓
" " 4.5 Rt end 30" Drain Pipe	9.80	8.39	✓
+80	8.8	9.4	✓
+89	7.5	10.7	✓
+92	4.6	13.6	✓
66+00	3.9	14.3	✓
+13 36" palm 35 Rt to Ctr			
+13 Lt	4.9	13.3	✓
Set B.M. #9. Mon opp 65+75+ Stone coming Mon	4.40	〈13.79〉	✓
+28	4.9	13.3	✓
+45 14" pepper Tree 6 Rt			
+48	7.3	10.9	✓
+60	7.8	10.4	✓
+70	5.1	13.1	✓
+75 36" palm 35 Rt to Ctr 20 clearance	4.8	13.4	✓
+85	5.3	12.9	✓
67+00	8.6	9.6	✓
+30	8.7	9.5	✓

		18.19		
+37			5.6	12.6
+42	36" palm 35' Rt to ct	2e clearance	6.2	12.0
+48			6.2	12.0
+56			9.9	8.3
68+00			10.3	7.9
+50			10.3	7.9
+67.25	P.O.T. on stake			
T.P. on P.O.T.	5.58	13.60	10.17	8.02
69+00			55	8.1
+14	10" Eucalyptus 5' Rt			
+50			5.6	8.0
+52.9	6 Rt outlet	Flow 30" culvert	7.38	6.22
70+00			4.8	8.8
+50			4.9	8.8
71			4.6	9.0
+50			4.3	9.3
72			3.2	10.4
+26.76	L.Lt on stake		2.91	10.69
Set BM	4.51	15.29	2.82	10.78
+50			45	10.8
73			5.2	10.1
+55			5.3	10.0
+62			2.4	12.9
+73			2.8	12.5
+80			4.9	10.4

1" pipe 10' Rt of Sewer ℄

		15.29		
74			5.0	10.3
+50			4.9	10.4
75			5.1	10.2
+50			4.9	10.4
76			4.4	10.9
+50			4.3	11.0
77			4.2	11.1
+50			3.5	11.8
Set BM	6.06	16.41	4.94	10.35
+94			4.9	11.5
78			6.1	10.3
+05			6.2	10.2
+20			4.5	11.9
+50			5.8	10.6
+70			5.5	10.9
79			6.3	10.1
+50			6.4	10.0
+80			6.2	10.2
80			6.1	10.3
+50			5.6	10.8
+75			6.1	10.3
+91.25	L Lt on stk		6.63	9.78
"	" 4' Lt		4.8	11.6
81	7° Lt 30" Eucalyptus		6.2	10.2
"	3' Lt		4.6	11.8
1.2' Rt Toe Highway fill			6.2	10.2
+31	30" Eucalyptus 8' Rt			

Common & Harney St. N&W line of 1885 Survey

	〈16.41〉		
+41	18" Eucalyptus 85 Lt		
82+50		6.3	10.1
"	2' Rt Toe Highway fill	6.3	10.1
"	3 Lt	9.4	12.0
+65		5.8	10.6
82		6.3	10.1
"	2' Lt	4.3	12.1
"	2 Rt Toe Highway fill	6.3	10.1
+02	24" Eucalyptus 9' Lt		
+50		6.2	10.2
"	25 Rt. Toe Highway fill	6.2	10.2
"	3' Lt	4.9	11.5
83		6.1	10.3
	1' Rt	6.1	10.3
	3 "	5.0	11.4
	3 Lt	5.0	11.4
	+50	5.9	10.5
"	2' Rt Toe fill	5.9	10.5
"	3 Lt	5.5	10.8
84		5.5	10.9
"	2' Lt	6.5	9.9
"	2' Rt	4.1	12.3
+14	24" culvert outlet. Flow Line	5.25	11.16
+47		4.3	12.1
"	" 2' Lt. outlet +18 Wood Pipe culvert parallel to ℄ of Road + Sewer	6.67	9.74

	〈16.41〉		
+48		3.3	13.1
+63		2.5	13.9
TP 838	〈21.36〉	3.43	〈12.98〉
+77		6.3	15.1
+83	℄ Mission Valley Aut of Loveday.	6.0	15.4
"	230' Lt. Floor	7.94	13.42
85		5.8	15.6
+90		6.1	15.3
+65		5.6	15.8
+93		7.4	14.0
"	3' Lt entrance end culvert Parallel to ℄ of Sewer	9.76	〈11.60〉
86		7.2	14.1
+50		6.7	14.7
"	4' Lt: Drainage Ditch	8.9	12.5
+60		6.8	14.6
"	3 " "	8.5	12.9
+95		5.8	15.6
"	160' Lt - Floor lowest House 19' Aut ct	8.63	12.73
87		5.7	15.7
+35		4.5	16.9
"	" 2' Lt	4.5	16.9
"	" 6 "	6.4	15.0
+50		4.1	17.3
88		2.8	18.6
+50		1.3	20.1

		(21.36)		
89			0.2	21.2
T.P.	11.74	(32.42)	0.68	(20.68)
+50			9.8	22.6
90			8.6	23.8
+50			68	25.6
+90 18" Tree 6.5 Lt in clear				
91			4.5	27.9
+07 24" Palm 5.7 Lt in clear				
+38 24 " 6.5 Lt "				
+39			3.0	29.4
+50			2.6	29.8
+71. 36" palm 6.7 Lt in clear				
92			0.3	32.1
+03 24 Lt on stake			0.29	32.13
T.P. 09 L.	10.20	(42.33)	0.29	(32.13)
Set BM.			8.77	(33.56)
+40			8.3	34.0
93			6.6	35.7
+50			5.3	37.0
+77 Tel. Pole 4.7 Lt in clear				
+90			4.5	37.8
94			4.8	37.5
+12			4.1	38.2
+50			3.3	39.0
95			2.8	39.5
" 2" Fan palms 4 8 Ft in clear				

BP in Mon 20+-Lt 92+30

		(42.33)		
95+06. Tel pole 4 Ft in clear				
+22			4.0	38.3
+28 " " Guy 4.2 Ft. "				
+50			3.6	38.7
96			3.0	39.3
+15			2.8	39.5
T.P. 4.18		(43.57)	2.94	(39.39)
+50			4.3	39.3
97			3.7	39.9
+10			4.1	39.5
+32.89 L. on stake			4.36	39.21
Set BM			3.86	39.71 1" pipe 10 Lt L.
+50			4.2	39.4
98			4.2	39.4
+50			4.5	39.1
99			5.4	38.2
+50			5.9	37.7
100			6.3	37.3
+50			7.2	36.4
101			8.4	35.2
+50			9.5	34.1
T.P. 4.70		(39.24)	9.01	(34.56)
102			4.8	34.5
+50			6.5	32.8
+63			6.8	32.5
+70			6.1	33.2

	↑ (39.26) ✓	
102+90	1.4	37.9 ✓
103	1.1	38.2 ✓
+30 80 on POT stake	1.73	37.53 ✓
+56 30" Eucalyptus 7.4 Rt in clear		
+63	7.3	32.0 ✓
+64	8.3	31.0 ✓
+72	8.9	30.4 ✓
+79 30" Eu. 8.4 Rt in clear		
104	17.0	22.3 ✓
+10	18.3	21.0 ✓
T.P. 0.49 (29.31) ✓	10.44	(28.82) ✓
+15 5.3 Lt in clear 30"		
+15	9.2	20.1 ✓
" 3' Rt Toe Hiway fill	8.6	20.7 ✓
+35 Toe Hiway fill	10.0	19.3 ✓
" 3' Rt	8.6	20.7 ✓
+50	8.3	21.0 ✓
" " 5' Lt	10.9	18.4 ✓
" " 5 Rt	6.5	22.8 ✓
+55	9.0	20.3 ✓
+77	8.4	20.9 ✓
" 2' Lt	9.6	19.7 ✓
+83	6.4	22.9 ✓
+94	4.7	24.6 ✓
" 5' Lt	7.7	21.6 ✓
105	4.8	24.5 ✓
" 5' Rt	3.5	25.8 ✓
" 5 Lt	5.2	24.1 ✓

	↑ (29.31) ✓	
+15	4.9	24.4 ✓
" " 5' Lt	6.8	22.5 ✓
" " 5 Rt	4.4	24.9 ✓
+22	5.8	23.5 ✓
" " 7' Lt	9.7	19.6 ✓
" " 4 Rt	4.5	24.8 ✓
+33	6.3	23.0 ✓
" 4' Lt	8.1	21.2 ✓
" 4 Rt	4.5	24.8 ✓
+37 42" Eucalyptus 3' in clear		
+46	8.8	20.5 ✓
" " 4' Lt	9.0	20.3 ✓
" " 4 Rt	6.1	23.2 ✓
+67	8.7	20.6 ✓
+71.5 Base culvert side, wall Ground	10.8	18.5 ✓
" Top " "	6.62	22.69 ✓
+68?	10.8	18.5 ✓
+82.9 Base Culvert Sidewall	11.6	17.7 ✓
+82.9 Top. Retaining wall	6.95	22.36 ✓
+88	8.9	20.4 ✓
" 2' Lt	10.4	18.9 ✓
" 3' Rt	7.4	21.9 ✓
+93	8.7	20.6 ✓
106	10.1	19.2 ✓
+16 72 on Stake	10.96	18.35 ✓

		⟨29.31⟩			
106+27			11.2	18.1	✓
+45			7.2	22.1	✓
+57			4.8	24.5	✓
"	2' Lt		5.9	23.9	✓
"	5 "		7.9	21.4	✓
+69			6.6	22.7	✓
+78			8.0	21.3	✓
107			7.9	21.9	✓
+25			6.2	23.1	✓
+40			5.9	23.4	✓
+50			5.6	23.7	✓
+60			5.1	24.2	✓
"	" 8' Lt		8.7	20.6	✓
+70			7.3	22.0	✓
107+75	78 L Rt on stake		7.67	21.64	✓
"	" 8' Lt		12.3	17.0	✓
+95			11.8	17.5	✓
108			12.3	17.0	✓
"	5' Lt		14.1	15.2	✓
TP	1.64	⟨18.47⟩ ✓	12.48	⟨16.83⟩ ✓	
Set BM			4.10	14.37 ~~12.37~~	Mon on Row 10' Lt 108+03.88
+04	Tel pole 1.8 Lt unclear				
+10			2.8	15.7	✓
+22			4.3	14.2	✓
+50			4.9	13.6	✓

		⟨18.47⟩ ✓			21
109			5.0	13.5	✓
+50			5.3	13.2	✓
110			5.5	13.0	✓
+50			5.4	13.1	✓
111			5.1	13.4	✓
+50			5.0	13.5	✓
+65			5.5	13.0	✓
+95			5.5	13.0	✓
112			4.8	13.7	
+09			4.3	14.2	✓
"	" 16' Rt flow 30" culvert		4.61	13.86	✓
+40			5.2	13.3	✓
+50			4.7	13.8	✓
+95			5.2	13.3	✓
113			5.9	12.6	✓
TP	3.05	16.15 ✓	5.37	⟨13.10⟩ ✓	
+10			4.6	11.6	✓
+45	24" cottonwood 6 Rt unclear				
+35			6.0	10.2	✓
+58	46 B.C. Lt on stake		5.83	10.37	✓
Set BM	10' Lt on Row 1½" pipe		5.95	⟨10.20⟩ ✓	
114			5.6	10.6	✓
+50			4.5	11.7	✓
115			4.5	11.7	✓
+05	Tel pole anchor 2' Rt				

			16.15	
+10			4.3	11.9
+35	Telephone pole on ℄ # 4275104			
+35			2.9	13.3
+50			2.6	13.6
T.P.	5.38	19.62	1.91	14.24
+90			6.3	13.3
116			5.7	13.9
+01	16' Rt. outlet end flow	36" culvert	5.89	13.73
+16			3.9	15.7
+37			4.4	15.2
+46			6.1	13.5
+50			6.5	13.1
+75			6.5	13.1
117			6.5	13.1
+33	Guy 3' Rt			
+33	Tel Pole 6' Lt			
+50			6.1	13.5
118			5.5	14.1
+15			5.0	14.6
+37			5.2	14.4
+50			5.6	14.0
EC +76 21	on stake		5.48	14.14
Set BM.			5.61	14.01 — 1" Pipe on R.O.W. 10' Lt at 118+76 21
119			4.9	14.71
+50			4.8	14.8

		19.62	5.33 / 3.5 / 8.83	22
120			4.2	15.4
T.P.	6.75	22.60	3.77	15.85
+34	Tel pole 5.5 Lt			
+50			7.6	15.0
121			7.7	14.9
+50			8.2	14.4
+75			8.0	14.6
+88			7.5	15.1
+91			8.1	14.5
122			8.1	14.5
+45			7.3	15.3
" "	outlet end 36" culvert	15' Rt flowline	8.49	14.11
+58			7.5	15.1
+65			6.1	16.5
+70			7.2	15.4
+78			7.1	15.5
+82			5.4	17.2
123			4.7	17.9
+08			7.9	14.7
+20	Tel Pole 6.6 Lt			
+22			7.7	14.9
+40			6.2	16.4
+50			7.9	15.2
+73			7.3	15.3
" "	Flowline 92 culvert outlet end	17.6 Rt	8.83	13.77

		(22.60)			
124			70	15.6	
+50			72	15.4	
125			67	15.9	
+50			66	16.0	
126			65	16.1	
TP	4.99	(21.75)	5.84	(16.76)	
+30			48	17.0	
+50			47	17.1	
+74			47	17.1	
+80			3.1	18.7	
+95			32	18.6	
127			46	17.2	
+22			55	16.3	
+50			54	16.4	
128			45	17.3	
+50			45	17.3	
129			47	17.1	
+03 Tel Pole 6.8 Lt, indoor					
+50			49	16.9	
130			47	17.1	
+50			48	17.0	
+70			46	17.2	
Set BM	3.81	(20.35)	5.21	(16.54)	2" Pipe on Pour 10' Lt 130+78+- 73+39 Hiwar sta. P.O.T. opp SW Cor PL 1105
+75			4.2	16.2	
+84			3.3	17.1	
+92			4.0	16.4	

		(20.35)			
131			44	16.0	
+20			48	15.6	
+28			41	16.3	
+50			40	16.4	
+93 Tel Pole 7' Lt					
132			38	16.6	
+50			41	16.3	
133			47	15.7	
+50			48	15.6	
134			47	15.7	
+50			46	15.8	
+87 Tel Pole 6.8 Lt					
135			41	16.3	
+50			39	16.5	
136			43	16.1	
TP 5 4.13		(21.36)	4.12	(16.23)	
+50			4.6	16.8	
+66 24" Culvert 17.7 Rt			4.58	16.78	outlet end Flow Line
137			4.9	16.5	
+50			4.6	16.8	
138			4.9	16.5	
+15			4.3	17.1	
+50			3.9	17.5	
139			3.5	17.9	
TP 3.83		(22.31)	2.88	(18.48)	

	T 〈22.31〉		
+45		4.4	17.9
+50		4.9	17.4
+58 · 11' Rt. FlowLine · 24" culvert outlet end		6.08	16.23
+60		4.2	18.1
+80		4.8	17.5
140		4.8	17.5
+50		4.8	17.5
+73 · Tel Pole, 5.8 Lt in clear			
141		4.7	17.6
+50		4.9	17.4
142		4.7	17.6
+50		4.9	17.4
143		4.9	17.4
+46 · Tele Dead Man 4' Lt in clear			
+50		4.7	17.6
+68 · Tel Pole 9.2 Lt in clear			
144		4.5	17.8
+50		4.1	18.2
+60		4.1	18.2
T.P.	5.02 〈23.89〉	3.44	〈18.87〉
+65		4.5	19.4
+76		4.2	19.7
+80		5.2	18.7
145		5.3	18.6
+50		5.3	18.6
+58 Tel Pole 3' Lt in clear			

	T 〈23.89〉		
146		4.9	19.0
+90 · 16' Rt. FLine 24' culvert		6.20	17.69
+50		4.8	19.1
147		4.7	19.2
+06 1/2 B.C. Lt		4.74	19.15
Set BM. 10' Ltron R.O.W. 2" pipe		4.31	〈19.58〉
+50		4.6	19.3
+72 Tel Pole 3' Lt in clear			
+73 " " Guy 7.5 Rt in clear			
+85		4.3	19.6
148		4.0	19.9
+50		4.3	19.6
149		4.2	19.7
+45 Tele. Pole 4.5 Rt in clear			
+50		4.1	19.8
" " Tel Guy pole 8' Lt			
TP 7.78	〈28.58〉	3.09	〈20.80〉
150		8.6	20.0
+50		8.6	20.0
+65		8.7	19.9
+72		7.2	21.4
+90		6.3	22.3
151		7.2	21.4
+08		8.9	19.7
+50		9.2	19.4

	↑ (28.58)		
+76 56 E.C. on stake		9.18	19.40
Set BM		7.58	21.00 Mon Spr Rt on Niway EC
152		9.3	19.3
+50		9.4	19.2
153		9.1	19.5
+50		8.3	20.3
154		7.8	20.8
+30 36" Eucalyptus 2.6 Lt to Clr			
+43 56 B.C. Rt on stake		7.14	(21.44)
TP on B.C. 10:34	(31.78)	7.14	(21.44)
+48 G+Lt Guy pole 2.4 Lt in clear			
155		10.6	21.2
+50		10.9	20.9
156		11.1	20.7
+35		11.6	20.2
+50		10.6	21.2
+52 G+Lt pole 2.3 Lt in clear			
+66 36" Eucalyptus 5.5 Lt. in clear			
+85		10.0	21.8
157		10.8	21.0
+04 36" Eucalyptus 3.9 Rt in clear			
+12		10.3	21.5
+20		7.8	24.0
+35		8.4	23.4
+50		9.7	22.1

	↑ (31.78)	5X3 6" Wall	225
+55		7.8	24.0
+60		7.7	24.1
+66		12.2	19.6
+75 12.2 Rt Ctr Triple Box culvert		Flow Line 11.83	19.95
+79		12.5	19.3
+80		9.6	22.2
+84		8.7	23.1
158		11.0	20.8
Check BM Cp TK East Side + North End Dbl Box culvert 6th St + Camino Del Pio 2.P		7.05	(24.73) 24.71 0.02 Diff
+15		11.6	20.2
+50		11.2	20.6
TP on BM 1.91	(26.64)	7.05	(24.73)
+67		5.5	21.1
+77		2.9	23.7
+90		3.0	23.6
159		5.1	21.5
+30		5.3	21.3
+46 51 E.C. on stake		5.82	20.8
+73		5.4	21.2
160		5.5	21.1
+50		5.1	21.5
161		4.6	22.0
+50		4.5	22.1
162		4.6	22.0
+01 G+Lt Guy Pole 2.2 Lt in clear 5" Dia			

		⟨26.64⟩		
+50			45	22.1
163			4.9	21.7
T.P.	5.49	⟨27.92⟩	4.21	⟨22.43⟩
+50			52	22.7
+52.5	6.5 Rt & 24" Culvert Sewer &	parallel to Flow Line	6.30	21.6
+70			5.3	22.6
+85			30	24.9
+88.N	Edge Rock & Oil paving	See Sketch	1.8	26.1
164			1.7	26.2
+30			1.1	26.8
+50			1.1	26.8
+71.5	E. Edge Rock & Oil paving		1.3	26.6
+80			4.2	23.7
+81	2.3 Rt to edge culvert H. Wall	Top	2.77	25.15
+85.65	Rt to & 20" Culvert & Sewer	parallel to Flow	5.72	22.20
+91	- 3.4 Rt to Edge Headwall			
165			4.3	23.6
"	3' Rt Bottom Drainage Ditch		7.1	20.8
+50			5.2	22.7
"	4' Rt		6.8	21.1
166			4.1	23.8
"	2' Lt. Natural Grd.		5.2	22.6
"	3' Rt		5.1	22.8
"	5 " Bottom Drainage Ditch		6.9	21.0

		⟨27.92⟩		
+50	Note & is on Top of excavated Material from Drainage Ditch		4.6	23.9
"	2' Lt Natural Ground		5.4	22.5
"	2 Rt " "		5.3	22.6
"	3.5 Rt Bottom Drainage Ditch		7.0	20.9
167			4.6	23.3
	2' Rt		4.6	23.3
	3 " Bottom Drainage Ditch		7.1	20.8
	2 Lt		5.1	22.8
+50			5.7	22.2
"	2' Rt Bottom Drainage Ditch		7.1	20.8
168			6.8	21.1
	1' Rt		6.8	21.1
"	1 Lt		6.8	21.1
"	2 "		5.7	22.2
TP	8.75	⟨30.30⟩	6.37	⟨21.55⟩
+50			9.4	20.9
"	1' Rt		9.4	20.9
"	2 "		8.0	22.3
"	1.5 Lt		9.4	20.9
"	2' Lt		7.9	22.4
169			9.1	21.2
"	1' Rt		9.1	21.2
"	2 "		8.1	22.2
"	2.5		8.3	21.4
"	3' Lt		7.6	22.7
+50			9.1	21.2
"	2' Rt		9.1	21.2
"	3 "		7.9	22.4

〈30.30〉		
+50 1' Lt	9.1	21.2 ✓
" 2 "	7.6	22.7 ✓
170	8.9	21.4 ✓
" 2.5 Rt	8.8	21.5 ✓
" 0.5 Lt	7.4	22.9 ✓
" 3' Lt	6.0	24.3 ✓
+30	7.4	22.9 ✓
" 1' Rt	8.9	21.4 ✓
" 3 " Lt	7.4	22.9 ✓
+68 Tel. P. Mon 3.4 Lt. in clear		
+90 " Pole 3.5 Lt " "		
+90	6.6	23.7 ✓
" 2' Lt.	5.2	25.1 ✓
" 2 Rt	7.2	23.1 ✓
" 3 " Bottom Drainage Ditch	8.9	21.4 ✓
171+03.95 Lt on stake	5.46	24.84 ✓
" " 2' Lt	3.6	26.7 ✓
" " 2' Rt	5.8	24.5 ✓
" " 2.5 Bottom Drainage Ditch	9.3	21.0 ✓
Set BM.	4.26	〈26.04〉 ✓ L.P. on Disk Top Headwall S Side on
170+93 - 13.4 Rt 24" culvert Flowline	7.84	22.46 ✓
171+30	5.9	24.4 ✓
" " 2' Lt	4.7	25.6 ✓
" " 2' Rt	6.7	23.6 ✓
" " 3' Rt Bottom D. Ditch	9.1	21.2 ✓

〈30.30〉		
+45	7.5	22.8 ✓
" 2' Lt	6.3	24.0 ✓
" 3 " Natural Ground	7.6	22.7 ✓
" 3' Rt Bottom Dr. Ditch	9.3	21.0 ✓
+60	8.4	21.9 ✓
" " 2' Lt.	6.6	23.7 ✓
" 2' Rt Bottom	9.0	21.3 ✓
+75	6.9	23.4 ✓
" 1' Lt	6.2	24.1 ✓
" 1 Rt	7.4	22.9 ✓
2 " Bottom D. Ditch	8.6	21.7 ✓
172	6.6	23.7 ✓
" 2' Lt	6.8	23.5 ✓
" 2' Rt	8.4	21.9 ✓
+44 Tel Pole 4.1 Lt in clear		
+50	6.6	23.7 ✓
" 2' Rt	8.2	22.1 ✓
" 2 Lt	6.4	23.9 ✓
173	6.4	23.9 ✓
" 2' Rt	8.0	22.3 ✓
" 2 Lt	6.2	24.1 ✓
+50	6.7	23.6 ✓
" 2' Lt	6.4	23.9 ✓
" 2 Rt	7.8	22.5 ✓

	⟨30.30⟩		
174		6.3	24.0
" 2' Lt		6.1	24.2
" 2' Rt		7.8	22.5
T.P.	3.26 ⟨29.16⟩	4.40	⟨25.90⟩
+50		5.3	23.9
" 1.5 Rt. Bottom Drainage Ditch		6.5	22.7
" 2' Lt		5.0	24.2
175		5.0	24.2
" 1.5 Rt		6.4	22.8
" 2' Lt		4.7	24.5
+50		5.1	24.1
" 1.5 Rt		6.0	22.8
" 2' Lt		4.7	24.5
+61 Tele. pole 4.5 Lt in clear			
176		5.1	24.1
" 1' Rt		6.4	22.8
" 2' Lt		4.7	24.5
+50		4.8	24.4
" 1.5 Rt		6.3	22.9
" 2' Lt		4.5	24.7
177		4.4	24.8
" 1.5 Rt		6.0	23.2
" 2' Lt		4.0	25.2
+11 Tel. Pole 4.5 Lt in clear			
+50		4.3	24.9
" 2.3 Rt		6.0	23.2
" 2' Lt		4.0	25.2

	⟨29.16⟩		
178		4.5	24.7
" 2' Rt		5.9	23.3
" 2' Lt		4.2	25.0
+50		4.6	24.6
" 2' Rt		5.7	23.5
" 2' Lt		4.3	24.9
+55 Tel Pole 5' Lt in clear			
179		4.6	24.6
" 2' Rt		5.6	23.6
" 2' Lt		4.2	25.0
+43 24" culvert 13.5 Rt Flow Line		5.48	23.68
+50		4.6	24.6
2' Rt		5.5	23.7
2' Lt		4.3	24.9
180		4.4	24.8
" 2' Rt		5.5	23.7
" 2' Lt		4.2	25.0
T.P.	4.31 ⟨29.65⟩	3.82	⟨25.34⟩
+10 Tele pole 4.7 Lt in clear			
+50		4.5	25.2
" 2.3 Rt		6.0	23.7
" 2 Lt		4.2	25.5
181		4.9	24.8
" 2' Rt		6.1	23.6
" 2 Lt		4.6	25.1
+50		5.4	24.3
2' Rt		6.2	23.5
2' Lt		4.1	25.6

	〈29.65〉		
+52 Tele Pole 5' Lt. in clear			
182	4.8	24.9	✓
" 2.5 Rt	6.0	23.7	✓
" 2' Lt	3.9	25.8	✓
+50	5.0	24.7	✓
" 2' Rt	5.8	23.9	✓
" 2' Lt	4.1	25.6	✓
+92 Tele Pole 4.4 Lt in clear			
183	5.0	24.7	✓
" 2' Rt	5.8	23.9	✓
" 2 Lt	4.1	25.6	✓
+50	4.9	24.8	✓
" 2' Rt	5.7	24.0	✓
" 2' Lt	4.0	25.7	✓
184	5.2	24.5	✓
" 1 Rt	5.8	23.9	✓
" 2' Lt	3.8	25.9	✓
+08 90° Rt Lt. to Hiway BC. on stake	5.73	23.92	✓
+14 24" culvert 18' Rt. Flow	5.11	24.54	✓
+23	5.7	24.0	✓
" 2 Lt	3.6	26.1	✓
" 2 Rt	3.6	26.1	✓
+33. Tele. pole 3.5 Lt in clear			
" " Guy & Mag 3.5 Rt "			
48	4.8	24.9	✓
" 2 Lt	4.8	24.9	✓
" 1' Rt	3.9	25.8	✓
+50	3.9	25.8	✓

	〈29.65〉			
Set BM 4.15	〈32.04〉	1.76	〈27.89〉	40" Penny Spike Gulf Pole # 79083 35' Lt +- 184+28
185+02 56' Lt. Lt on stake		5.00	27.04	✓
+46		4.5	27.5	✓
" 1' Lt		6.6	25.4	✓
" 4 " Drainage Ditch		6.6	25.4	✓
+50		6.6	25.4	✓
" 1' Rt		4.5	27.5	✓
" 2 Lt		6.6	25.4	✓
+81. Tel Pole 3.5 Lt. in clear				
" " " D. Mag Guy 4.2 Rt "				
186		6.4	25.6	✓
" 1' Lt		4.3	27.7	✓
" 2' Rt		6.4	25.6	✓
+17' W End 24" iron pipe Cmt		6.4	25.6	✓
+34 E " " " 1° Lt of &		6.40	25.64	✓
+58		6.7	25.3	✓
" 2' Lt		6.7	25.3	✓
" , Rt		4.8	27.2	✓
+60		4.8	27.2	✓
187		5.0	27.0	✓
" 2' Lt		6.7	25.3	✓
+25		4.8	27.2	✓
+28		6.3	25.7	✓
+33		6.2	25.8	✓
" 7.7 Rt Flow Line 30" culvert		6.57	25.47	✓

	〈32.04〉		
1+39		3.8	28.2
1+44		4.8	27.2
1+50		4.8	27.2
188		4.6	27.4
1+50		5.2	26.8
1+58		5.0	27.0
1+67		3.8	28.2
1+90		4.2	27.8
189		5.0	27.0
1+03. Tele. Pole 43. Rt in clear			
1+06		5.7	26.3
1+93 18" culvert 13' Rt Flow		5.49	26.55
1+50		5.4	26.6
1+56.27 L.	5.14 〈32.05〉	5.13	〈26.91〉
190		5.1	27.0
2+25.44 Rt L. to Hiway 56		5.2	26.9
Set BM		4.59	27.46 2" Pipe 10' Lt 190+25.
1+50		5.0	27.1
191		4.9	27.2
1+50		4.7	27.4
192		4.8	27.3
1+50		4.7	27.4
193		4.6	27.5
1+40		4.2	27.9
1+50		3.1	29.0

	〈32.05〉		
1+94. 6" Tree. 1' Lt		3.1	29.0
194		3.47	28.58
107 W Edge 4' Walk		3.47	28.58
1+11 5" " "			
1+26 5" Tree on &			
1+40		3.5	28.6
1+50		4.0	28.1
195		3.7	28.4
T.P. 8.18	〈37.02〉	3.21	〈28.84〉
1+50		8.7	28.3
196		8.5	28.5
1+50		8.7	28.3
197		8.4	28.6
1+50		8.1	28.9
1+60		7.6	29.4
1+65		8.0	29.0
1+70		8.5	28.5
1+70 18" culvert 14 Rt Flow		9.44	27.58
198		8.6	28.4
Set BM		6.47	〈30.55〉 B.P. culvert N. way. 60+ - Rt of 197+70
1+50		8.4	28.6
199		8.4	28.6
1+50		8.4	28.6
200		8.3	28.7
T.P. 4.52	〈33.84〉	7.70	〈29.32〉

		⟨33.84⟩			
200 +50			5.0	28.8	✓
201			5.0	28.8	✓
+50			4.9	28.9	✓
202			4.8	29.0	✓
+50			4.8	29.0	✓
203			4.6	29.2	✓
+50			4.7	29.1	✓
204			4.6	29.2	✓
+50			4.4	29.4	✓
Set BM	3.58	⟨35.51⟩	1.91	⟨31.93⟩	30 Penny Spike in Telephone Pole 15' Rt + 204+03. Pole # 87891
205			5.9	29.6	✓
+50			5.9	29.6	✓
206			5.6	29.9	✓
+26.5	W Edge Con Driveway		5.86	⟨29.65⟩	
		Cut	5.9	29.6	✓
			5.98	29.53	✓
+29			5.2	30.3	✓
+37	E Edge 16' Con Driveway		5.98	29.53	✓
+50			5.4	30.1	✓
+75			5.0	30.5	✓
+80			4.1	31.4	✓
207			4.0	31.5	✓
+20			4.2	31.3	✓
+30			5.3	30.2	✓
+45			5.8	29.7	✓
" 16.5' Lt Floor Plumbing outlet Lowest of Bonds Houses			5.85	29.66	✓
+95 Ctr Bonds Gas 50' Lt Main Floor			3.00	32.51	✓
208			5.6	29.9	✓

	⟨35.51⟩		
+50	5.3	30.2	✓
+51.8 W Edge Con Drive	5.54	29.97	✓
+62.9 E Edge Con Drive	5.45	30.06	✓
+99 30" Fan Palm 5' Lt Anchor			
+75	5.0	30.5	✓
209	4.6	30.9	✓
+37	4.2	31.3	✓
144 4" Fan Palm 35 Lt in clear			
+45	2.3	33.2	✓
+50	2.2	33.3	✓
" 2' Lt	4.2	31.3	✓
+55	3.9	31.6	✓
+80	3.5	32.0	✓
+85 W End 3 Pump 7.6 Rt Top	2.77	32.74	✓
210	3.3	32.2	✓
105 West End Sec. Sta. Bldg 3.5 Lt	3.4	32.1	✓
+10 East End 3 pump rock	2.77	32.74	✓
+12 East end Sec Sta. Office	3.4	32.1	✓
+17 Ctr 4X8 Gas Storage Tank			
TP. 4.08	⟨35.65⟩ 3.94	⟨31.57⟩	
Top of Gas Tank Inlet	3.45	32.20	✓
Bottom 81 Below Inlet	11.55	24.10	✓
+23.3 3.5 Lt Ft to Con Parking	3.53	32.12	✓
+30	3.6	32.1	✓
+35	4.0	31.7	✓
" 4' Lt Plumbing outlet of one of Bonds Residences	3.30	32.35	✓

	(35.65)		
+50	4.1	31.6	✓
+68	4.1	31.6	✓
+72	3.8	31.9	✓
+88	3.8	31.9	✓
+95	4.8	30.9	✓
" " 14'8 Rt Flow 18" culvert	5.43	30.22	✓
211	3.9	31.8	✓
+50	4.5	31.2	✓
212	4.7	31.0	✓
+18.01 BC Lt on Stake	4.81	30.84	✓
+50			
Set BM	1.81	(33.84)	✓ 3 Nails in Gas Lt Pole # 7917 Bot. Rt 212770
+50	4.5	31.2	✓
+75	4.4	31.3	✓
213	4.0	31.7	✓
+25	3.7	32.0	✓
+50	4.5	31.2	✓
+69 Tel Pole 5' Lt in clear			
214	4.8	30.9	✓
+50	4.5	31.2	✓
+96 Tele pole 1.5 Lt in clear			
" Guy D Mon Rt "			
215	4.6	31.1	✓
+25	4.3	31.4	✓
+50	4.4	31.3	✓

	(35.65)		
216	4.8	30.9	✓
+40 57 E.C.	4.8	30.9	✓
TP on EC 463 (35.54)	4.74	(30.91)	✓
+75 Tele Pole # 418310	5.0	30.5	✓
217	4.7	30.8	✓
+50	4.6	30.9	✓
218	4.8	30.7	✓
+32 Tel Pole # 87899 on Lt			
+50 5' BC Rt on Stake	4.65	30.89	✓
Set BM	4.47	31.07	✓ 2" pipe 10' Lt of Sewer & C
219	4.6	30.9	✓
+50	4.2	31.3	✓
+55	3.7	31.8	✓
+74 36" Eucalyptus on Lt			
+80	1.9	33.6	✓
T.P 9.17 (41.79)	2.92	(32.62)	✓
+97 Telepole # 418313 · 23 Lt in clear			
220	9.2	32.6	✓
+20	9.4	32.4	✓
+50	8.7	33.1	✓
221	6.8	35.0	✓
+25	5.6	36.2	✓
+50	5.0	36.8	✓
+55 Tele pole 2.7 Lt in clear			
+60	4.9	36.9	✓
+90	3.0	38.8	✓

		⟨41.79⟩			
222			8.6	33.2	✓
+02			8.6	33.2	✓
+07			5.0	36.8	✓
+14			6.5	35.3	✓
+25			5.9	35.9	✓
+50			6.3	35.5	✓
+90			6.3	35.5	✓
223.			6.8	35.0	✓
+07.93	E.C		7.17	34.62	✓
Sct. BM	5.12	⟨38.69⟩ ✓	8.22	⟨33.57⟩ ✓	2' R.O.W. Pipe 10' Lt of Sanna & EC Hiway
+13	Tele pole #418311 1.0 Lt in clear				
+50			5.0	33.7	✓
224			5.6	33.1	✓
+21			5.3	33.4	✓
+28			2.6	36.1	✓
+48			2.6	36.1	✓
+60			3.1	35.6	✓
+64			5.2	33.5	✓
225			5.6	33.1	✓
+20 Tele Pole #018310 4.4					
+50			5.0	33.7	✓
+80			5.5	33.2	✓
226			5.5	33.2	✓
+30			5.1	33.6	✓
+50			5.3	33.4	✓

		⟨38.69⟩			
+60 Tele Pole 4.5 Lt in clear					
+80			5.0	33.7	✓
+85			5.9	32.8	✓
227			6.0	32.7	✓
+50			5.4	33.3	✓
228			4.5	34.2	✓
+15 Tele pole 4.3 Lt in clear					
+38			4.2	34.5	✓
" " 17.3 Rt Flow Line 24" culvert			4.70	33.99	✓
+50			4.0	34.7	✓
229			3.7	35.0	✓
TP	11.09	⟨46.37⟩ ✓	3.41	⟨35.28⟩	✓
+50			10.8	35.6	✓
+59. Tel Pole #87900 3.5 Lt in clear					
230			10.7	35.7	✓
+50			10.4	36.0	✓
231			10.2	36.2	✓
+14. Tel Pole #108308 3.1 Lt in clear					
+50			8.9	37.5	✓
232			7.3	39.1	✓
+40			6.1	40.3	✓
233			5.3	41.1	✓
+14. Tel. Pole #418307. 2.9 Lt in clear					
+50			4.8	41.6	✓

	⟨46.37⟩		
234		4.7	41.7
+50		55	40.9
+72 G+L Pole 08 Lt in clear	# SP 79963 # 418306 Tel		
T.P.	8.17 ⟨50.49⟩	4.05	⟨42.32⟩
235		10.6	39.9
+50		11.5	39.0
+85 31 BC Rt on stake		12.14	38.35
Set BM		12.18	38.31 2" R.O.W. pipe 10' Lt of Survey
236		12.3	38.2
+25		12.4	38.1
+50		12.3	38.2
+75		11.5	39.0
+88.14" G+Lt Pole 067 in clear	# 418305		
237		10.7	39.8
+10		10.1	40.4
+30 Int 18" culvert	Ground	5.6	44.9
" 11.5 Lt outlet flow		10.06	40.43
" 80.9 Rt inlet "		6.47	44.02
+94		2.1	48.4
Check BM	7.24 ⟨50.35⟩	7.31	43.18
+65		1.4	43.11 ← corrected 0.07 error
+76	Note See plans for this culvert under Camino Del Rio	2.2	49.0 48.2
+81 W. Side Lt box culvert #4		3.2 90°	47.2 41.33 Top invert
4 12.6 Lt flow outlet end		12.85	37.50
" 131.4 Rt " inlet "		7.04	43.31
+87		40	46.4
" 11.4 Lt to outlet end			

	⟨50.35⟩		
+94 east side Box culvert		4.6	45.8 37.50
" 11.9 Lt to outlet end Flow		12.85	
238		5.8	44.6
+33		11.6	38.8
+37 Tel Pole 53 Rt in clear			
" T.D. Mon 10 Lt " "			
+50		12.9	37.5
239		14.1	36.3
+50		14.2	36.2
T.P. 5.05	⟨43.40⟩	12.00	⟨38.35⟩
+86 76 EC on stake		7.22	36.18
Top Hiway R.O.W 2" pipe	+86 76	6.76	36.64 Top 2" pipe 6' Lt Hiway EC.
240		7.2	36.2
+16 Tel Pole 46 Rt #422106			
+50		7.1	36.3
241		7.0	36.4
+50		6.8	36.6
+80		6.2	37.2
+90		5.1	38.3
+97		5.3	38.1
+99 21 Rt Lt to Hiway EC on stake		5.75	37.65
Set BM		5.79	37.61 10' Lt on 2" R.O.W. pipe
242+05 Tel Pole 55 Lt			
+07		6.6	36.8
+50		6.7	36.7
+6~		7.0	36.4

	⟨43.40⟩			
242+98		6.6	36.8	✓
" " 24" culvert 16.8 Rt Flow		6.96	36.94	✓
+50	Toe Hiway fill	6.9	37.0	✓
+75		4.1	39.3	✓
"	4' Lt	6.2	37.2	✓
+96.87	L. Lt	3.16	40.24	✓
" "	7' Rt Edge Paving	258.	40.82	✓
244		3.2	40.2	✓
+19	Toe Hiway fill	6.0	37.4	✓
+50		5.9	37.5	✓
245		5.6	37.8	✓
T.P.	446 ⟨42.89⟩	4.97	⟨38.43⟩	✓
+50		4.7	38.2	✓
+52	Tel pole # 41830 1/4 2.5 nuckers			
+65		4.4	38.5	✓
+66		4.9	38.0	✓
+72	27" Eucalyptus Stump on ℄ on Lt to Hiway			
+93.83	Rt L. to Hiway EC	4.78	38.11	✓
Set BM		4.25	38.64	✓ 2" Pipe on Hiway Row 10' Lt of Swale
245		4.7	38.2	✓
+50		4.7	38.2	✓
+80		5.2	37.7	✓
247		4.9	38.0	✓
+06	Tel pole 7.3 Rt			
+50		4.9	38.0	✓

	⟨42.89⟩			
248		4.8	38.1	✓
+50		4.3	38.6	✓
+56	Tel pole 7.9 Rt			
249		2.5	40.4	✓
+14		1.9	41.0	✓
+50		1.8	41.1	✓
+75		1.5	41.4	✓
+90		0.8	42.1	✓
250		1.1	41.8	✓
T.P. 451	⟨46.74⟩	0.66	⟨42.23⟩	✓
+30		4.4	42.3	✓
+50		4.8	41.9	✓
" "	Tele pole 7.1 Rt			
251		4.9	41.8	✓
+50		4.8	41.9	✓
252		4.8	41.9	✓
+50		4.7	42.0	✓
253		4.8	41.9	✓
+50		4.8	41.9	✓
254		5.0	41.7	✓
+50		5.0	41.7	✓
255		5.0	41.7	✓
+10		4.4	42.3	✓
+40		1.1	45.6	✓
" "	3' Lt	4.6	42.1	✓

		(4674)		
TP	7.52	(53.71)	0.55	(46.19)
+50			7.2	46.5 ✓
+94			8.6	45.1 ✓
+95	36" Cypress Stump 2.5 Rt in Gear			
+97			10.4	43.3 ✓
256			9.8	43.9 ✓
+07			11.3	42.4 ✓
+44			11.0	42.7 ✓
" "	13' Rt Flow Line 25° cut		10.73	42.98 ✓
257			10.9	42.8 ✓
+50			10.0	43.7 ✓
+60			9.5	44.2 ✓
+78			7.3	46.4 ✓
+88.72	Rt L to Hiway BC		7.81	45.90 ✓
Set BM			9.48	44.23 ✓
T.P.	12.64	(64.18)	2.17	(51.54) ✓
Check B/M #16	Fred Miller's Survey for Camino Del Rio		9.42	54.76
See FB 1530 P25				54.78
				0.02 error

VOID (Line Change) See Pg. 51

24" Pipe on N Line at Power Pole 257+88.72

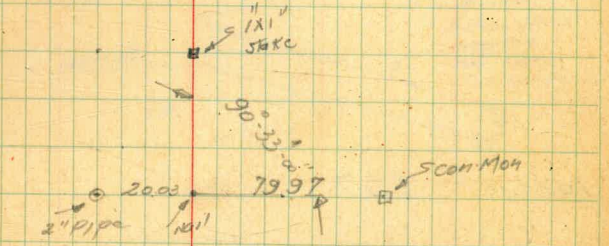
Q.P.P. Hub 35' Lt of 202 = 21.32

Levels Continued Page 51

92+03.24 L Lt. 4°-25'-45"

911+16.10 · P.O.T. = 33+63.63 Camino Del Rio Hiway
See RB 1588-P.87

80+91.75 L Lt 0°-47'-00"

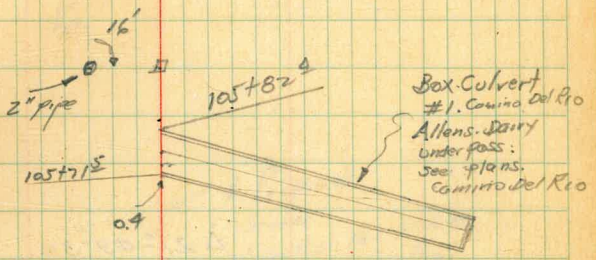


107+75.78 L. Rt 5°-15'-30

106+16.72 P.O.T. = 48+65.52 Camino Del Rio Stationing
See FB 1588- P 9

103+30.80 P.O.T.

97+32.89 L. Rt 0°-36'-00" Rt = 33+82.87 Camino Del Rio Sta.
See page 0 - FB 1588

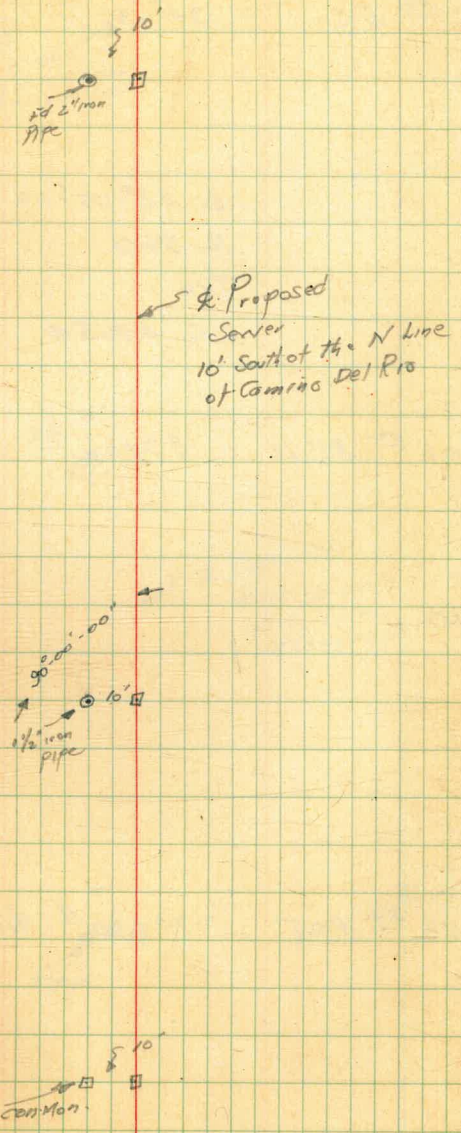


118+76.21 E.C. = 6/+37.08 Camino Del Rio
See FB 1588-P 11

Δ 21°-49'-30
R. 1360
Tan = 262.21 Def 0°-01.26¢ per ft
L.C. 518.05

113+58.16 B.C. Lt. = 56+03.35 Camino Del Rio station
See FB 1588 P-11

108+03.88 P.O.T. Rt. L. to Hiway E.C. = 50+69.07 Camino Del Rio sta
See FB 1588-P 10

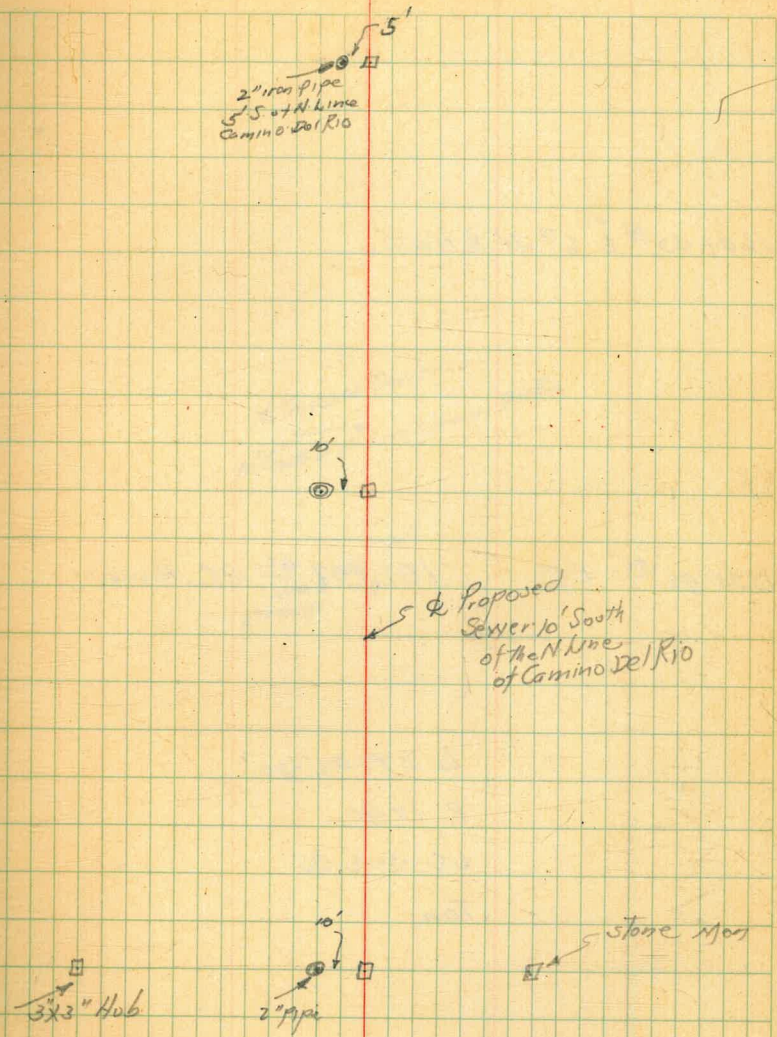


151+76 $\frac{56}{}$ E.C. = 94+57.$\frac{04}{}$ Camino Del Rio
See FB 1588 P. 17

Δ 28°-05'-00
R. 960
Tan
ℓC. 470.54

147+06.$\frac{02}{}$ B.C. ℓ = 89+66.$\frac{89}{}$ B.C. Camino Del Rio
Sta.

130+78.$\frac{24}{}$ P.O.T. = 73+39.$\frac{11}{}$ Hiway Camino Del Rio

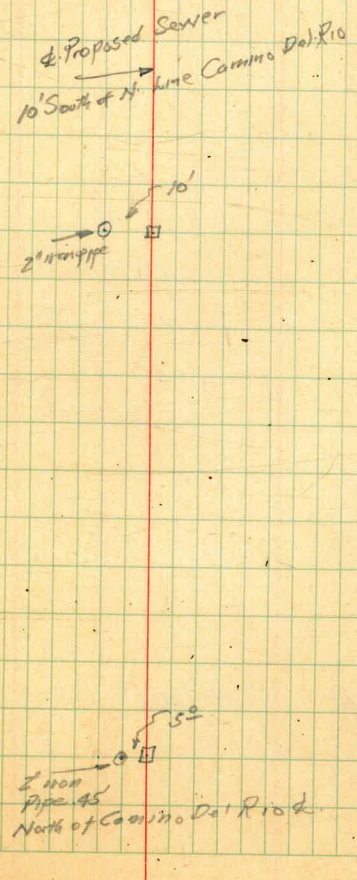


164+49.14 ± 6.79 St. to North

159+46.51 E.C. = 102+07.62 B.C. Hiway.

Δ 27°-42'-30"
R. 1040
L.C. 502.95
Tan.

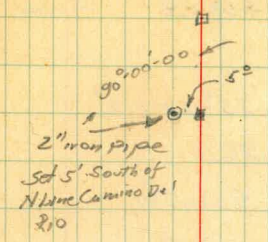
154+43.56 B.C. Rt = 97+24.04 Camino Del Rio
See F.B. 1588 P. 17



185+02.56 L.Lt 11°-09'-00"

184+08.90 POT = BC Hiway = 126+70.40 Hiway Sta
See FB 1598 : P 25

171+03.95 L. Lt 1°-04'-00" = 113+65.45 Camino Del Rio



216+40.51 E.C. = 159+18.59 Hiway E.C. See F.B. 1588-p30

Δ 25°-13'-10"

R. 960

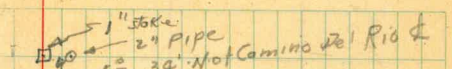
L.C. 422.56

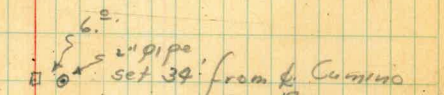
Tan = 214.75'

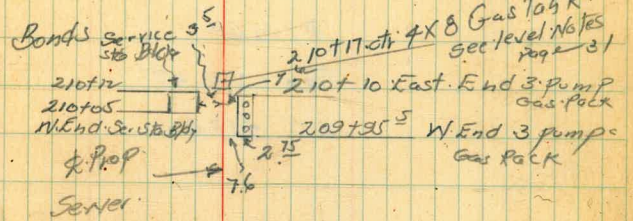
212+18.01 B.C. Lt. = 154+78.43 Hiway B.C.

190+25.44 P.O.T. Hiway E.C. = 132+85.86 See F.B. 1588-p25.

189+56.27 L. Rt 12°-12'-45"







223+07.$\frac{23}{-}$ E.C. = 165+68.$\frac{35}{-}$ E.C. Camino Del Rio

~~See~~ FB 1588 - P 31

Δ 25°.12'-00

R. 1040

Tan = 232.47'

L.C 457.42

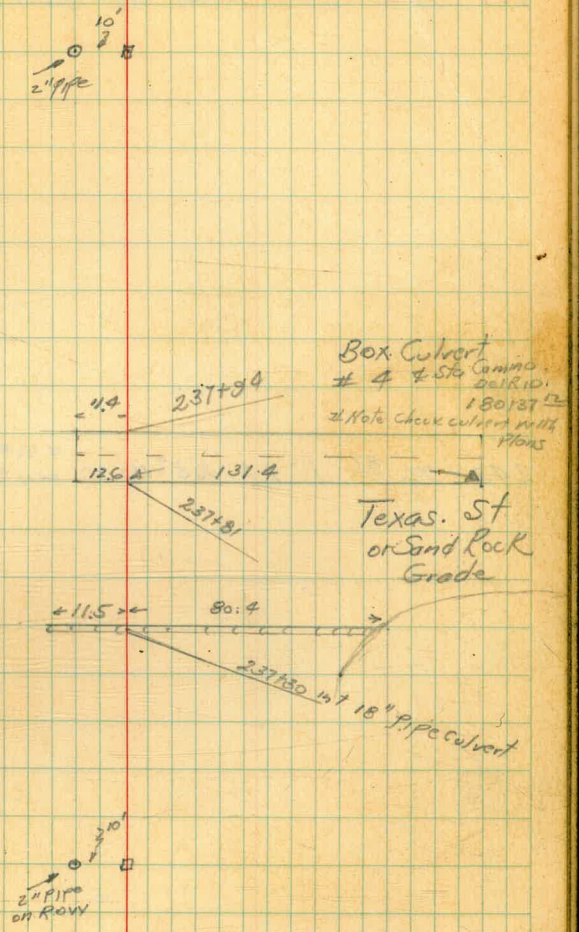
218+50.$\frac{51}{-}$ BC Rt = 161+28.$\frac{53}{-}$ Camino Del Rio

See FB 1588 P. 30

237+85.76 E.C. = 182+32.04 = Camino Del Rio
Sec FB. 1588-P.33

Δ 22°-07'-00"
R. 1040
Tan = 203.26'
L.C. 401.95
Def 0° 01' 53 per ft

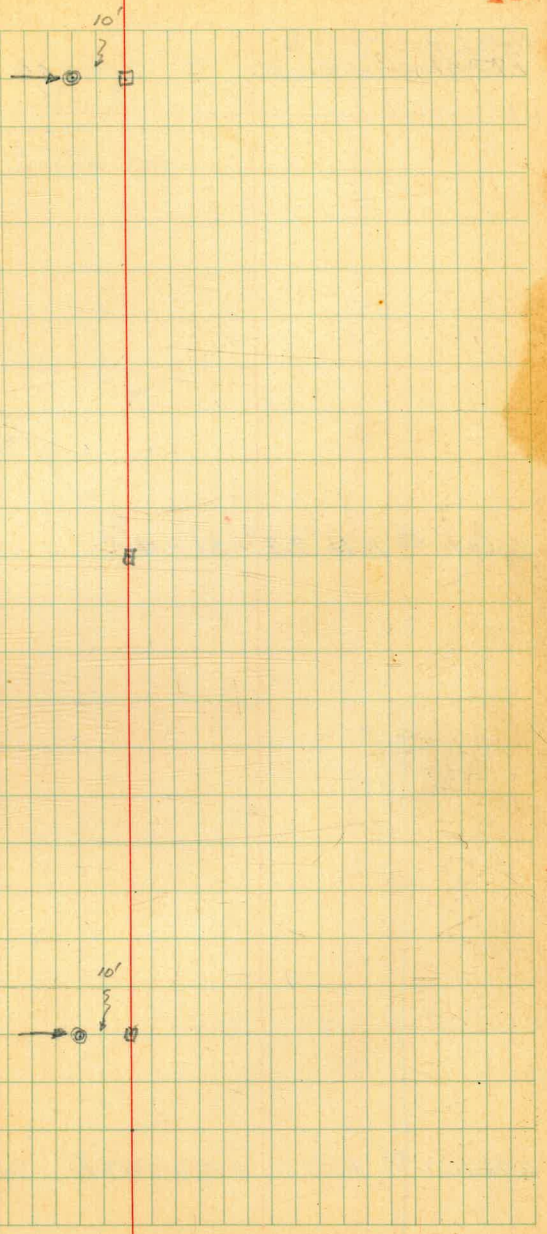
235+85.31 B.C. Rt = 178+46.04 Camino Del Rio
sec FB 1588 - P.33



245+23.83 P.O.T. Hiway E.C. = 188+49.21 Camino Del Rio

243+96.87 L. Lt 23°-11'-00 # R/W This curve runs to a P.I.

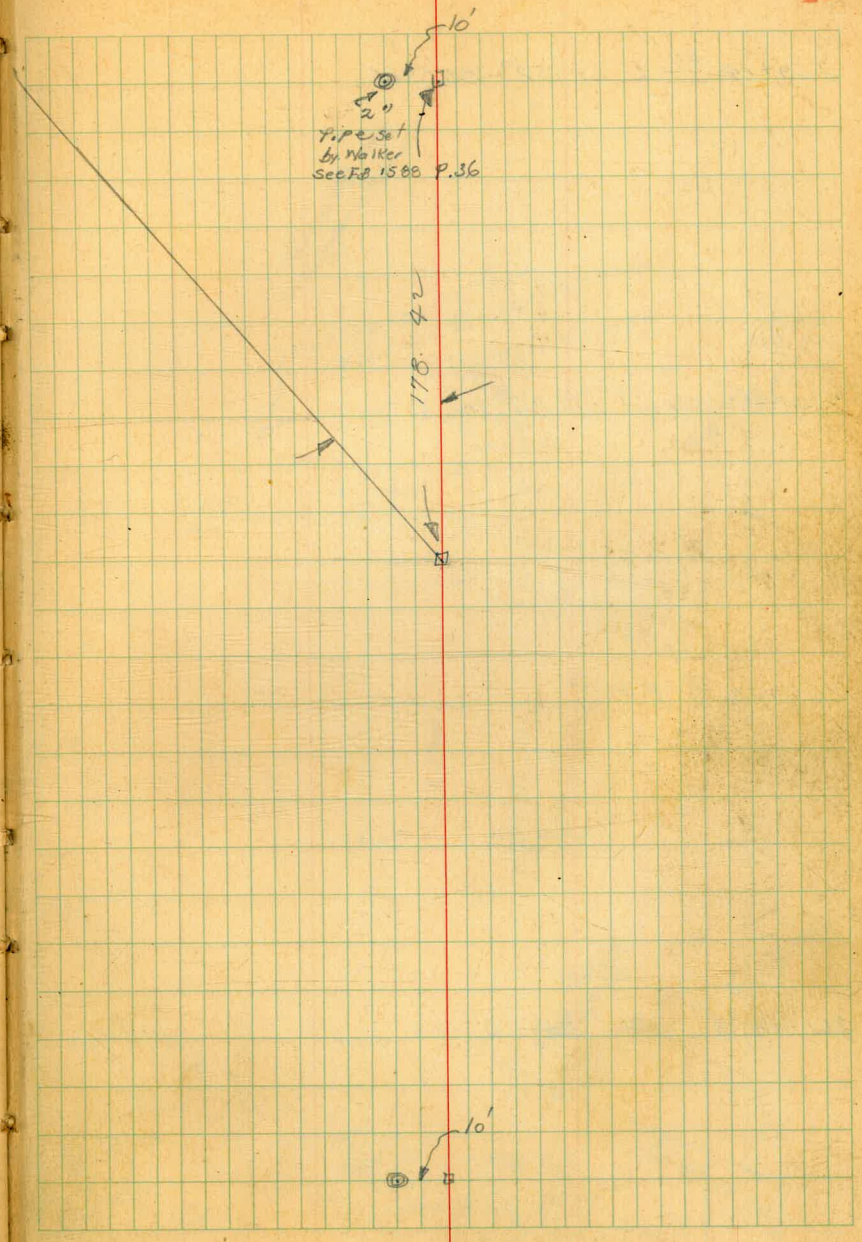
241+99.91 P.O.T. = B.C. Hiway = 189+45.13 Camino Del Rio



Note L was moved to
178.42 West of the BC = 200+44.80 Camino Del Rio
BC.

256+10.30 L. Lt 27°-51'-40"

295+93.83 P.O.T. = 188+49.91 See FB 1588 P.34

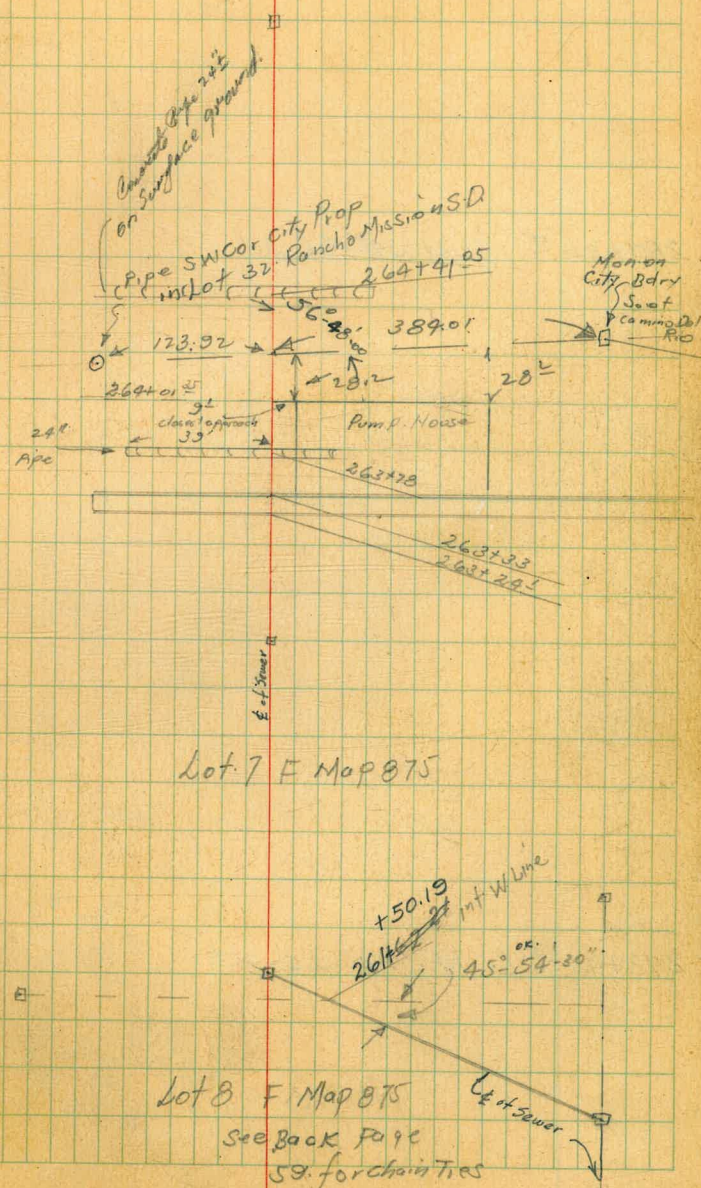


269+14.84 L. Lt 52°-05'-30"

264+39.96 int Old Bdry Line City

263+12.48 P.O.T.

261+78.40 L Rt 50°-10'-00



280+22.15 L. Lt 34°-43'-30"

273+45.38 L. Rt. 24°-25'-30"

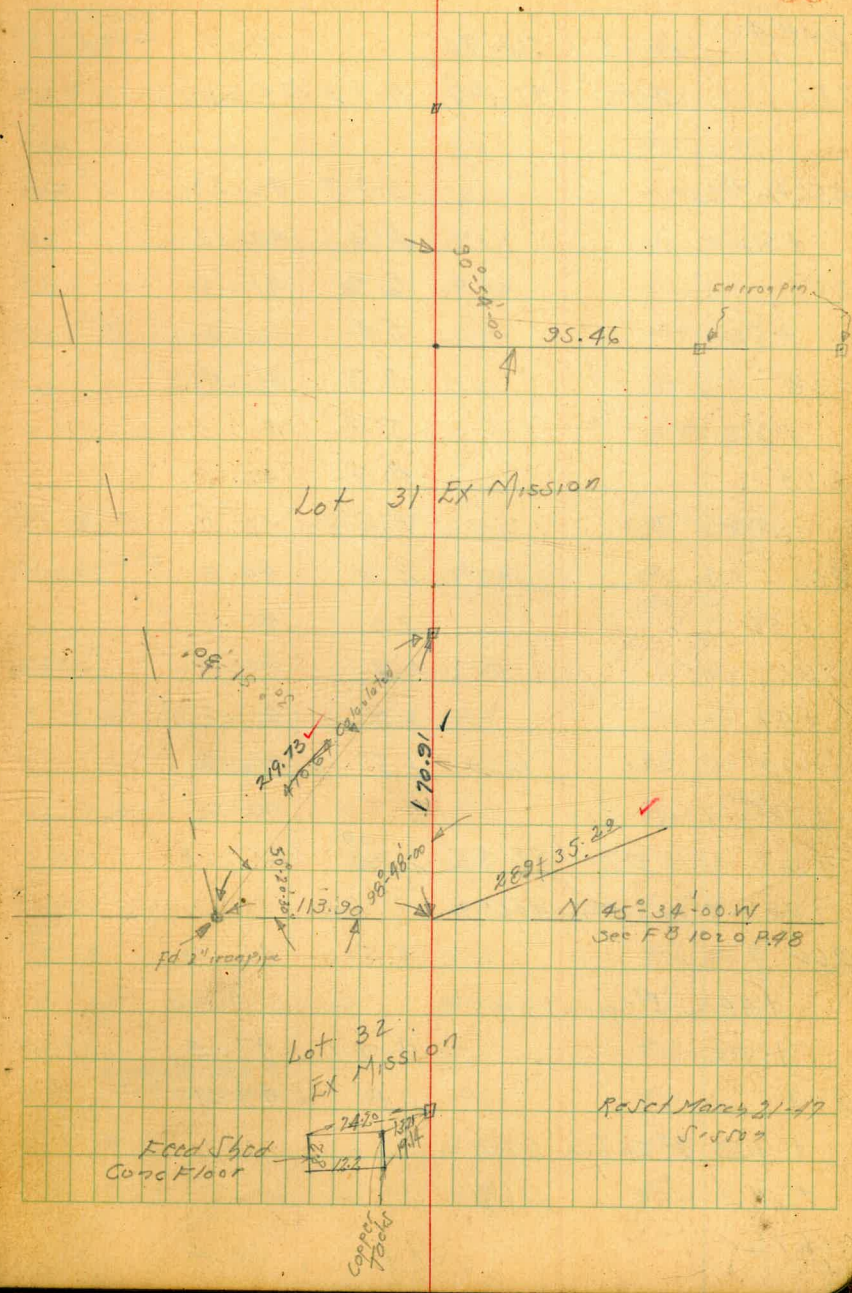
Continued Page 56

296+92.29 L. Rt 8°-02'-45"

295+28 7°. C.B.C.

291+06.20 L. Lt 6°-27'-30" ✓

284+14.90 L. Rt 20°-23'-30" x



BM#42	2.07	(56.74)		54.67	See FB 1629-P
TP.	2.72	(47.67)	11.79	(44.95)	
256+10 30 Lt			5.47	42.20	
+50			5.6	42.1	
257			6.2	41.5	
+50			5.4	42.3	
258			5.3	42.4	
+50			5.4	42.3	
259			4.9	42.8	
+50			3.8	43.9	
260			2.9	44.8	
+50			2.0	45.7	
261			1.9	45.8	
+47			2.4	45.3	
+49			1.5	46.2	
+78 40 L on stake			2.09	45.58	
TP on L	5.97	(51.55)	2.09	(45.58)	
+95 .4' apricot Tree 4.4 Lt ctr.					
262			5.5	46.0	
+44 .5' Apricot +3.4 Rt ctr					
+50			4.0	47.5	
263			1.8	49.7	
+02 7" Fig Tree 6.6 Lt ctr					
+11 6" " " 6.6 Rt ctr					
+16			1.1	50.4	

5/55

51

+22	9.4	42.1
+24 W. Side 6" wall	9.2	42.3
+24' Top of Vert Side 6" wall	6.01	45.54
+24' " inside " "	6.01	45.54
+24 8 Flowline of Spillway W Side	9.01	42.54
+32 2 " " " " E "	8.94	42.61
+32 4 Top E inside	5.91	45.64
+33 " " Outside	5.91	45.64
" " on Dirt	6.7	44.8
TP. 470 (50.24)	6.01	(45.54)
Check BM#43	4.04	46.20
		46.21 Diff
+50	5.0	45.2
+78 int 24" Pipe into Pumphouse	4.8	45.4
" " 39' Rt Flow Line	19.50	35.74
264 W side oil paving	4.1	46.1
+20	3.4	46.8
+30 E. Side oil Rock Paving	5.5	44.7
+34	3.8	46.4
+ Top 30" Culvert	4.32	45.92
+50	4.9	45.3
+75 Check approach to River channel	4.6	45.6
" " 9' Lt	5.4	44.8
" " 30 "	7.8	42.4

		⟨50.24⟩		
265			5.3	44.9
+25			6.7	43.5
" " 15 Lt			7.8	42.4
" " 25 "			10.1	40.1
" " 40 " Channel			12.7	37.5
+50			8.0	42.2
T.P.	4.15	⟨46.83⟩	7.56	⟨42.68⟩
266			5.3	41.5
+50			5.5	41.3
267			5.6	41.2
+40			3.8	43.0
+75			3.5	43.3
268			3.8	43.0
+50			3.4	43.4
+60			3.7	43.1
269			2.9	43.9
+05 T.P.			1.9	44.9
+14.89 L	0.20	⟨45.82⟩	1.21	⟨45.62⟩
+26			0.7	45.1
+30			1.6	44.2
+55			2.6	43.2
270			3.2	42.6
+30			3.7	42.1
+65			3.5	42.3
271			3.6	42.2
" 5' Rt			3.3	42.5
" 12 "			1.1	44.7

		⟨45.82⟩		
+50			3.9	41.9
272			3.9	41.9
" 13' Rt			3.3	42.5
" 31 "			+6.5	52.3
+50			3.6	42.2
+75			3.3	42.5
273			4.1	41.7
" 7' Rt			4.0	41.8
" 20 "			+1.5	47.3
" 41 "			+12.5	58.3
+45.38 L			4.49	41.33
Check BM #49	4.81	⟨47.99⟩	2.69	⟨43.18⟩ Bolt Top P. Ricards Well
278			7.2	40.8
" 4' Rt. NSide P. Ricards well 6.1 Dia			8.4	39.6
" " Ground water level in well			17.0	31.0
274			6.1	41.9
" 17' Rt			5.6	42.4
" 30 "			0.6	47.4
+50			5.9	42.1
+90			4.3	43.7
275			4.0	44.0
" 22' Rt Base P. Ricards Hill			3.1	44.9
" 30 "			+1.6	43.6
+25			3.2	44.8
+65			4.8	43.4

	↑ 47.99		
276		5.0	43.0 ✓
" 11' Rt. Base Records Hill		4.5	43.5 ✓
" 20 " Top "		+4.0	52.0 ✓
+30		4.1	43.9 ✓
+40		3.4	44.6 ✓
+55		3.2	44.8 ✓
+65		4.0	44.0 ✓
277		4.1	43.9 ✓
" " 75' Rt		2.0	46.0 ✓
+ 40		3.9	44.1 ✓
+ 75		4.3	43.7 ✓
278		3.6	44.4 ✓
T.P.	3.36 ⟨53.65⟩ ✓	3.70	⟨44.29⟩ ✓
+50		9.0	44.6 ✓
" " 14' Rt Toe Hiway fill		7.4	46.2 ✓
279		8.2	45.4 ✓
" 10 Rt " " "		7.2	46.4 ✓
+30		7.4	46.2 ✓
+60		7.0	46.6 ✓
+80		6.6	47.0 ✓
280		5.7	48.0 ✓
" " 10 Rt Toe Hiway fill		4.2	49.4 ✓
T.P. +22.5 LH	7.07 ⟨55.81⟩ ✓	4.91	⟨48.74⟩ ✓
" " 10' Rt Toe H. way fill		6.4	49.4 ✓
+60		7.4	48.4 ✓

	↑ 55.81		
+80		8.0	47.8 ✓
281		7.8	48.0 ✓
+13		7.4	48.4 ✓
+16		6.9	48.9 ✓
+50		7.1	48.7 ✓
282		7.0	48.8 ✓
check B.M. #45 90' +- Rt 282+55. BP Concrete Spillway W.W.		1.43	54.38 ✓
+90		6.8	49.0 ✓
+65		6.4	49.4 ✓
+85		5.6	50.2 ✓
283		6.0	49.8 ✓
+50		5.4	50.4 ✓
284		5.0	50.8 ✓
~~TP~~ +14.20 LH		5.05	50.76 ✓
TP on L. 545	⟨56.21⟩ ✓	5.05	⟨50.76⟩ ✓
+50		5.1	51.1 ✓
285		4.6	51.6 ✓
+50		4.4	51.8 ✓
286		4.3	51.9 ✓
+11		4.0	52.2 ✓
+13		5.2	51.0 ✓
+28		5.4	50.8 ✓
+30		5.0	51.2 ✓
+50		6.0	50.2 ✓

		(56.21)			
287			6.6	49.6	
+15			7.1	49.1	
+50			7.2	49.0	
288			7.1	49.1	
+50			6.8	49.4	
289			6.7	49.5	
Check BM	287	(54.88)	4.20	(52.01)	2" Pipe 8' Lt 289+30
+30			4.0	50.9	
+57			3.0	51.9	
290			3.7	51.2	
+50			3.5	51.4	
291			4.2	50.7	
+06 20 Lt			4.32	50.56	
" 60 Lt Top bank			6.1	48.8	
" 72 " River Bottom			11.0	43.9	
+50			4.9	50.0	
292			5.5	49.4	
" 52' Lt			6.4	48.5	
" 63 " River bottom			11.0	43.9	
+50			6.1	48.8	
293			6.5	48.4	
" 47 Lt Top bank			6.4	48.5	
" 65 River bottom			12.9	42.0	
+50			6.6	48.3	
294			6.5	48.4	

	(54.88)			
294 37' Lt Top bank		6.4	48.5	
" 47 " River bottom		11.1	43.8	
TP 467	(53.81)	5.74	(49.14)	
+50		5.0	48.8	
295		5.1	48.7	
" 27' Lt Top Bank		5.0	48.8	
" 39 " River Bottom		10.6	43.8	
+50		4.7	49.1	
" 6' Rt		4.8	49.0	
" 8' "		5.7	48.1	
296		4.2	49.6	
" 30' Lt		4.7	49.1	
" 41 "		9.7	44.1	
+90 Edge Bank Hiway Side		2.9	50.9	
+65		1.5	52.3	
+92 23		2.45	51.36	
" 1' Rt Toe Bank Hiway Side		2.5	51.3	
" 30 Lt Top Bank Riverside		5.3	48.5	
" 40 " River Bottom		8.4	45.4	
L.S. Tab 296+92 23	5.18	(56.54)	(51.36)	
297		5.5	51.0	
+50		5.5	51.0	
298		6.0	50.5	
" 6 Rt		5.4	51.1	
" 10 Lt		7.1	49.4	
" 95 "		7.6	48.9	

	(56.54)		
298+50		6.3	50.2
299+		5.6	50.9
" 9' Rt. bottom of bank		4.5	52.0
" 15' Rt		1.5	55.0
" 8 Lt. Brk.		7.1	49.4
" 50 Lt bottom		8.2	48.3
+50		5.2	51.3
300+00		4.5	52.0
" 8' Rt.		3.6	52.9
" 4' Lt		4.8	51.7
" 8' Lt		6.2	50.3
" 50' Lt		8.1	48.4
+50		4.1	52.4
301+00		4.0	52.5
" 5' Rt		3.2	53.3
" 10' Rt		0.7	55.8
" 12' Lt		5.2	51.3
" 15' Lt		6.5	50.0
" 50' Lt		7.5	49.0
Check B.M. = 47. (T.P.)	8.00	(58.89)	5.65 (50.89)
301+50		5.8	53.1
302+		5.1	53.8 ~~54.4~~
" 6 Rt		2.1	56.8
" 15 Lt		7.5	51.4
" 20 Lt		10.5	48.4
+50		5.0	53.9

	(58.89)		
303		3.5	55.4
" 3' Rt		2.1	56.8
" 6' Rt		1.5	57.4
" 1' Rt		4.2	54.7
" 12 Lt		5.1	53.8
" 19 Lt		7.0	51.9
" 20 Lt		10.0	48.9
" 100 Lt		10.4	48.5
+50		1.3	57.6
T.P.	5.17 (62.56)	1.50	(57.39)
303+55		5.7	56.9
" 5' Lt S.W. Cor. House		8.1	54.5
+81		5.5	57.1
" 5 Lt S.E. Cor. House		8.3	54.3
304-		4.8	~~54.1~~ 57.8
" 6' Rt.		2.7	59.9
" 4 Lt		7.0	55.6
" 16 Lt		9.3	53.3
" 25 Lt		12.3	50.3
" 50 Lt		13.5	49.1
+50		5.4	57.2
L.S. Sta. 304+75		5.45	57.11
" 6' Rt		2.9	59.7
" 4' Lt		7.7	54.9
" 16 Lt		8.0	54.6
" 25 Lt		11.5	51.1
" 50 Lt		12.2	50.4

Levels - Continued - Book 163 Page 1.

311+76 $\frac{24}{}$ L. Lt 5°-28'-30"

304+75.15 L Lt 8°-53'-45"

296+92 $\frac{29}{}$ L. Rt 8°-02'-45"

← Change 1629-31

Set Spk Hub
5-23-96
S. Shaw

322+94.83 ∠ Rt 27°-18'-30"

+71.63 2"x2" R.W. Tie Cut for Angle pt under Fence on back Tan.

322+70.45 int Wstly Line Line lot 46. George Buller See L.S. 348

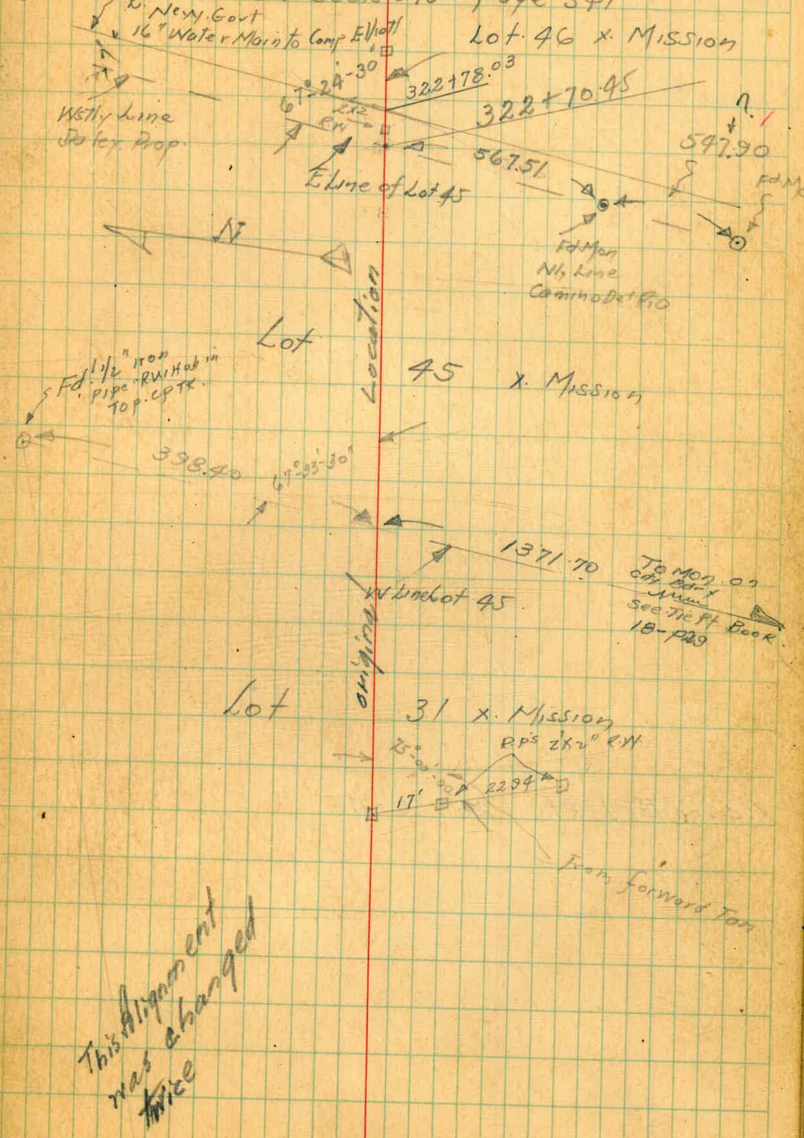
318+36.72 int. E Line Lot 31 W. Line Lot 45

316+12.59 ∠ Rt 26°-49'-45"

Black

George R. + Janet Daley

Deed Book 975 - page 347



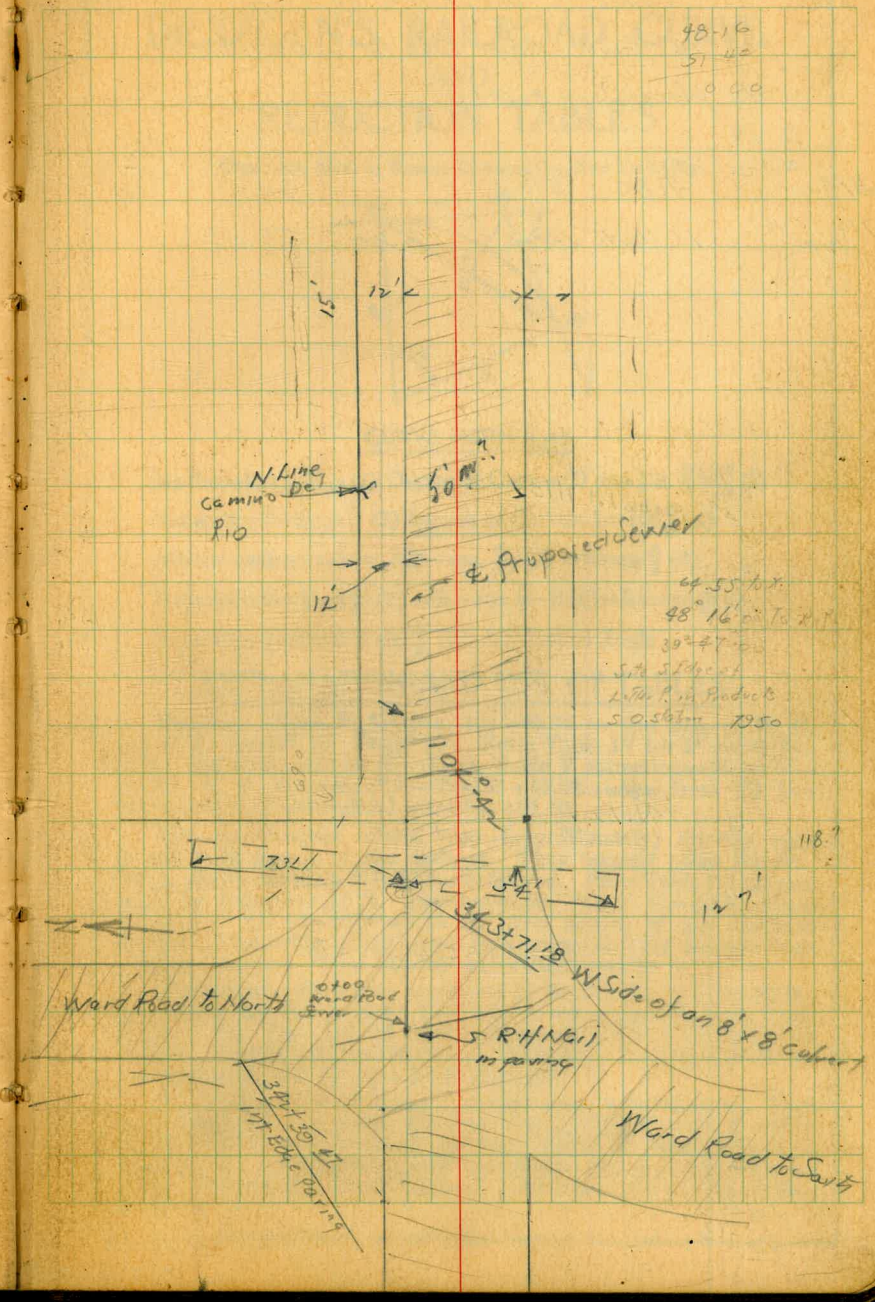
340+75 $\frac{95}{}$ L. Rt 62°-33'-15"

340+60 $\frac{55}{}$ P.O.T.

334+32.$\frac{75}{}$ L Rt 20°-55'-40"

394+26.54 30°-00-00 to 16+50.75 L. in County Road. no Lpt.

393+03.36 L. Lt 88°-26'-00

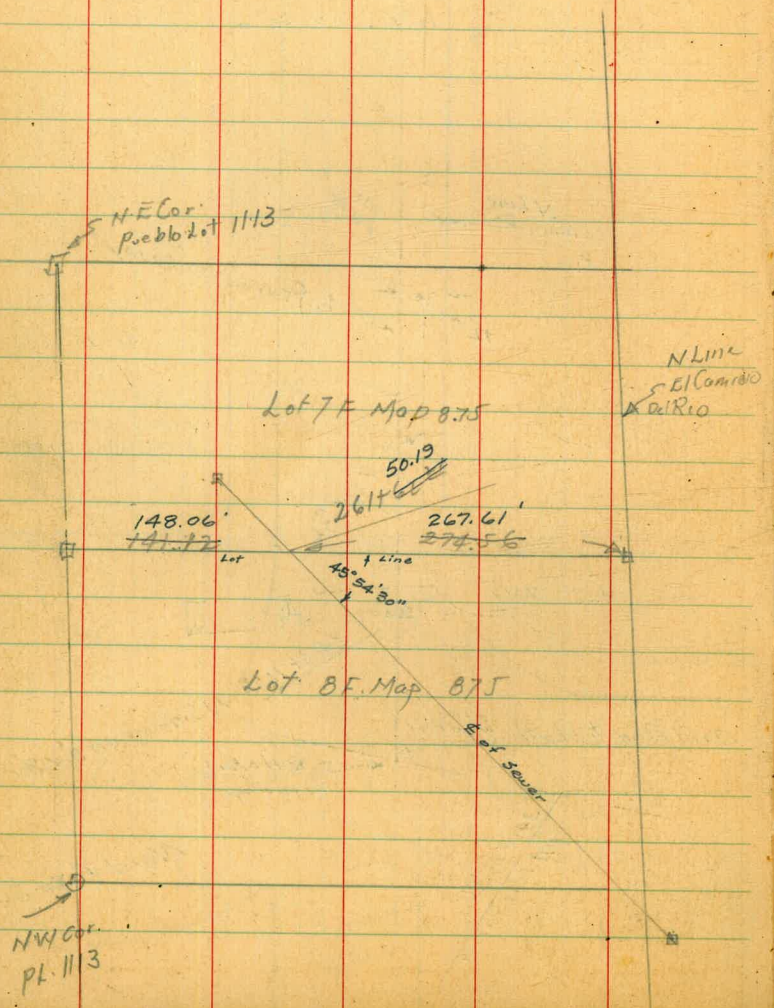


60

Levels to determine elevations
of 16" Govt Water Line to Camp Elliott
in place June 8-1942

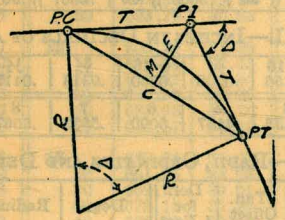
BM #42	4.80	59.47		54.67
Top of 16" Pipe	1.6 North of Bell		8.20	51.27

1629
6



DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

96
533
466
367
32



CURVE FORMULAS

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

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

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

External=E=T tan $\frac{\Delta}{4}$ (7) =R÷cos. $\frac{\Delta}{2}$—R (8)=R exsec $\frac{\Delta}{2}$ (9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. Δ=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157+45.50. Also from (4) L=746.00 and P. T.=Sta. P. C.+L=164+91.50.

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

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′+8° 20′÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or E=91.37 ft. Or suppose Δ=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and÷42=5.5 or D=5° 30′.

Table I.—Minutes in Decimals of a Degree.

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Table II.—Inches in Decimals of a Foot.

1–16	3–32	⅛	3–16	¼	5–16	⅜	½	⅝	¾	⅞
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

Table III.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid. Ord.	Tan. Offset	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan Offset	Def. for 1 Foot
0° 10′	34377.5	.036	.145	0.05′	7°	819.02	1.528	6.105	2.10′
20	17188.8	.073	.291	0.10	20′	781.84	1.600	6.395	2.20
30	11459.2	.109	.436	0.15	30	764.49	1.637	6.540	2.25
40	8594.42	.145	.582	0.20	40	747.89	1.673	6.685	2.30
50	6875.55	.182	.727	0.25	8	716.78	1.746	6.976	2.40
1	5729.65	.218	.873	0.30	20	688.16	1.819	7.266	2.50
10	4911.15	.255	1.018	0.35	30	674.69	1.855	7.411	2.55
20	4297.23	.291	1.164	0.40	40	661.74	1.892	7.556	2.60
30	3819.83	.327	1.309	0.45	9	637.28	1.965	7.846	2.70
40	3437.87	.364	1.454	0.50	20	614.56	2.037	8.136	2.80
50	3125.36	.400	1.600	0.55	30	603.80	2.074	8.281	2.85
2	2864.93	.436	1.745	0.60	40	593.42	2.110	8.426	2.90
10	2644.58	.473	1.891	0.65	10	573.69	2.183	8.716	3.00
20	2455.70	.509	2.036	0.70	30	546.44	2.292	9.150	3.15
30	2292.01	.545	2.181	0.75	11	521.67	2.402	9.585	3.30
40	2148.79	.582	2.327	0.80	30	499.06	2.511	10.02	3.45
50	2022.41	.618	2.472	0.85	12	478.34	2.620	10.45	3.60
3	1910.08	.655	2.618	0.90	30	459.28	2.730	10.89	3.75
10	1809.57	.691	2.763	0.95	13	441.68	2.839	11.32	3.90
20	1719.12	.727	2.908	1.00	30	425.40	2.949	11.75	4.05
30	1637.28	.764	3.054	1.05	14	410.28	3.058	12.18	4.20
40	1562.88	.800	3.199	1.10	30	396.20	3.168	12.62	4.35
50	1494.95	.836	3.345	1.15	15	383.07	3.277	13.05	4.50
4	1432.69	.873	3.490	1.20	30	370.78	3.387	13.49	4.65
10	1375.40	.909	3.635	1.25	16	359.27	3.496	13.92	4.80
20	1322.53	.945	3.718	1.30	30	348.45	3.606	14.35	4.95
30	1273.57	.982	3.926	1.35	17	338.27	3.716	14.78	5.10
40	1228.11	1.018	4.071	1.40	18	319.62	3.935	15.64	5.40
50	1185.78	1.055	4.217	1.45	19	302.94	4.155	16.51	5.70
5	1146.28	1.091	4.362	1.50	20	287.94	4.374	17.37	6.00
10	1109.33	1.127	4.507	1.55	21	274.37	4.594	18.22	6.30
20	1074.68	1.164	4.653	1.60	22	262.04	4.814	19.08	6.60
30	1042.14	1.200	4.798	1.65	23	250.79	5.035	19.94	6.90
40	1011.51	1.237	4.943	1.70	24	240.49	5.255	20.79	7.20
50	982.64	1.273	5.088	1.75	25	231.01	5.476	21.64	7.50
6	955.37	1.309	5.234	1.80	26	222.27	5.697	22.50	7.80
10	929.57	1.346	5.379	1.85	27	214.18	5.918	23.35	8.10
20	905.13	1.382	5.524	1.90	28	206.68	6.139	24.19	8.40
30	881.95	1.418	5.669	1.95	29	199.70	6.360	25.04	8.70
40	859.92	1.455	5.814	2.00	30	193.18	6.583	25.88	9.00

Note. Chord Deflection=2 times tangent deflection.

Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
1°	50.00	.22	11°	551.70	26.50	21°	1061.9	97.57
10′	58.34	.30	10′	560.11	27.31	10′	1070.6	99.16
20	66.67	.39	20	568.53	28.14	20	1079.2	100.75
30	75.01	.49	30	576.95	28.97	30	1087.8	102.35
40	83.34	.61	40	585.36	29.82	40	1096.4	103.97
50	91.68	.73	50	593.79	30.68	50	1105.1	105.60
2	100.01	.87	12	602.21	31.56	22	1113.7	107.24
10	108.35	1.02	10	610.64	32.45	10	1122.4	108.90
20	116.68	1.19	20	619.07	33.35	20	1131.0	110.57
30	125.02	1.36	30	627.50	34.26	30	1139.7	112.25
40	133.36	1.55	40	635.93	35.18	40	1148.4	113.95
50	141.70	1.75	50	644.37	36.12	50	1157.0	115.66
3	150.04	1.96	13	652.81	37.07	23	1165.7	117.38
10	158.38	2.19	10	661.25	38.03	10	1174.4	119.12
20	166.72	2.43	20	669.70	39.01	20	1183.1	120.87
30	175.06	2.67	30	678.15	39.99	30	1191.8	122.63
40	183.40	2.93	40	686.60	40.99	40	1200.5	124.41
50	191.74	3.21	50	695.06	42.00	50	1209.2	126.20
4	200.08	3.49	14	703.51	43.03	24	1217.9	128.00
10	208.43	3.79	10	711.97	44.07	10	1226.6	129.82
20	216.77	4.10	20	720.44	45.12	20	1235.3	131.65
30	225.12	4.42	30	728.90	46.18	30	1244.0	133.50
40	233.47	4.76	40	737.37	47.25	40	1252.8	135.35
50	241.81	5.10	50	745.85	48.34	50	1261.5	137.23
5	250.16	5.46	15	754.32	49.44	25	1270.2	139.11
10	258.51	5.83	10	762.80	50.55	10	1279.0	141.01
20	266.86	6.21	20	771.29	51.68	20	1287.7	142.93
30	275.21	6.61	30	779.77	52.89	30	1296.5	144.85
40	283.57	7.01	40	788.26	53.97	40	1305.3	146.79
50	291.92	7.43	50	796.75	55.13	50	1314.0	148.75
6	300.28	7.86	16	805.25	56.31	26	1322.8	150.71
10	308.64	8.31	10	813.75	57.50	10	1331.6	152.69
20	316.99	8.76	20	822.25	58.70	20	1340.4	154.69
30	325.35	9.23	30	830.76	59.91	30	1349.2	156.70
40	333.71	9.71	40	839.27	61.14	40	1358.0	158.72
50	342.08	10.20	50	847.78	62.38	50	1366.8	160.76
7	350.44	10.71	17	856.30	63.63	27	1375.6	162.81
10	358.81	11.22	10	864.82	64.90	10	1384.4	164.86
20	367.17	11.75	20	873.35	66.18	20	1393.2	166.95
30	375.54	12.29	30	881.88	67.47	30	1402.0	169.04
40	383.91	12.85	40	890.41	68.77	40	1410.9	171.15
50	392.28	13.41	50	898.95	70.09	50	1419.7	173.27
8	400.66	13.99	18	907.49	71.42	28	1428.6	175.41
10	409.03	14.58	10	916.03	72.76	10	1437.4	177.55
20	417.41	15.18	20	924.58	74.12	20	1446.3	179.72
30	425.79	15.80	30	933.13	75.49	30	1455.1	181.89
40	434.17	16.43	40	941.69	76.86	40	1464.0	184.08
50	442.55	17.07	50	950.25	78.26	50	1472.9	186.29
9	450.93	17.72	19	958.81	79.67	29	1481.8	188.51
10	459.32	18.38	10	967.38	81.09	10	1490.7	190.74
20	467.71	19.06	20	975.96	82.53	20	1499.6	192.99
30	476.10	19.75	30	984.53	83.97	30	1508.5	195.25
40	484.49	20.45	40	993.12	85.43	40	1517.4	197.53
50	492.88	21.16	50	1001.7	86.90	50	1526.3	199.82
10	501.28	21.89	20	1010.3	88.39	30	1535.3	202.12
10	509.68	22.62	10	1018.9	89.89	10	1544.2	204.44
20	518.08	23.38	20	1027.5	91.40	20	1553.1	206.77
30	526.48	24.14	30	1036.1	92.92	30	1562.1	209.12
40	534.89	24.91	40	1044.7	94.46	40	1571.0	211.48
50	543.29	25.70	50	1053.3	96.01	50	1580.0	213.86

Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
31°	1589.0	216.3	41°	2142.2	387.4	51°	2732.9	618.4
10′	1598.0	218.7	10′	2151.7	390.7	10′	2743.1	622.8
20	1606.9	221.1	20	2161.2	394.1	20	2753.4	627.2
30	1615.9	223.5	30	2170.8	397.4	30	2763.7	631.7
40	1624.9	226.0	40	2180.3	400.8	40	2773.9	636.2
50	1633.9	228.4	50	2189.9	404.2	50	2784.2	640.7
32	1643.0	230.9	42	2199.4	407.6	52	2794.5	645.2
10	1652.0	233.4	10	2209.0	411.1	10	2804.9	649.7
20	1661.0	235.9	20	2218.6	414.5	20	2815.2	654.3
30	1670.0	238.4	30	2228.1	418.0	30	2825.6	658.8
40	1679.1	241.0	40	2237.7	421.4	40	2835.9	663.4
50	1688.1	243.5	50	2247.3	425.0	50	2846.3	668.0
33	1697.2	246.1	43	2257.0	428.5	53	2856.7	672.7
10	1706.3	248.7	10	2266.6	432.0	10	2867.1	677.3
20	1715.3	251.3	20	2276.2	435.6	20	2877.5	682.0
30	1724.4	253.9	30	2285.9	439.2	30	2888.0	686.7
40	1733.5	256.5	40	2295.6	442.8	40	2898.4	691.4
50	1742.6	259.1	50	2305.2	446.4	50	2908.9	696.1
34	1751.7	261.8	44	2314.9	450.0	54	2919.4	700.9
10	1760.8	264.5	10	2324.6	453.6	10	2929.9	705.7
20	1770.0	267.2	20	2334.3	457.3	20	2940.4	710.5
30	1779.1	269.9	30	2344.1	461.0	30	2951.0	715.3
40	1788.2	272.6	40	2353.8	464.6	40	2961.5	720.1
50	1797.4	275.3	50	2363.5	468.4	50	2972.1	725.0
35	1806.6	278.1	45	2373.3	472.1	55	2982.7	729.9
10	1815.7	280.8	10	2383.1	475.8	10	2993.3	734.8
20	1824.9	283.6	20	2392.8	479.6	20	3003.9	739.7
30	1834.1	286.4	30	2402.6	483.8	30	3014.5	744.6
40	1843.3	289.2	40	2412.4	487.2	40	3025.2	749.6
50	1852.5	292.0	50	2422.3	491.0	50	3035.8	754.6
36	1861.7	294.9	46	2432.1	494.8	56	3046.5	759.6
10	1870.9	297.7	10	2441.9	498.7	10	3057.2	764.6
20	1880.1	300.6	20	2451.8	502.5	20	3067.9	769.7
30	1889.4	303.5	30	2461.7	506.4	30	3078.7	774.7
40	1898.6	306.4	40	2471.5	510.3	40	3089.4	779.8
50	1907.9	309.3	50	2481.4	514.3	50	3100.2	784.9
37	1917.1	312.2	47	2491.3	518.2	57	3110.9	790.1
10	1926.4	315.2	10	2501.2	522.2	10	3121.7	795.2
20	1935.7	318.1	20	2511.2	526.1	20	3132.6	800.4
30	1945.0	321.1	30	2521.1	530.1	30	3143.4	805.6
40	1954.3	324.1	40	2531.1	534.2	40	3154.2	810.9
50	1963.6	327.1	50	2541.0	538.2	50	3165.1	816.1
38	1972.9	330.2	48	2551.0	542.2	58	3176.0	821.4
10	1982.2	333.2	10	2561.0	546.3	10	3186.9	826.7
20	1991.5	336.3	20	2571.0	550.4	20	3197.8	832.0
30	2000.9	339.3	30	2581.0	554.5	30	3208.8	837.3
40	2010.2	342.4	40	2591.0	558.6	40	3219.7	842.7
50	2019.6	345.5	50	2601.1	562.8	50	3230.7	848.1
39	2029.0	348.6	49	2611.2	566.9	59	3241.7	853.5
10	2038.4	351.8	10	2621.2	571.1	10	3252.7	858.9
20	2047.8	354.9	20	2631.3	575.3	20	3263.7	864.3
30	2057.2	358.1	30	2641.4	579.5	30	3274.8	869.8
40	2066.6	361.3	40	2651.5	583.8	40	3285.8	875.3
50	2076.0	364.5	50	2661.6	588.0	50	3296.9	880.8
40	2085.4	367.7	50	2671.8	592.3	60	3308.0	886.4
10	2094.9	371.0	10	2681.9	596.6	10	3319.1	892.0
20	2104.3	374.2	20	2692.1	600.9	20	3330.3	897.5
30	2113.8	377.5	30	2702.3	605.3	30	3341.4	903.2
40	2123.3	380.8	40	2712.5	609.6	40	3352.6	908.8
50	2132.7	384.1	50	2722.7	614.0	50	3363.8	914.5

Table IV.—Tangents and Externals to a 1° Curve,

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
61°	3375.0	920.2	71°	4086.9	1308.2	81°	4893.6	1805.3
10′	3386.3	925.9	10′	4099.5	1315.6	10′	4908.0	1814.7
20	3397.5	931.6	20	4112.1	1322.9	20	4922.5	1824.1
30	3408.8	937.3	30	4124.8	1330.3	30	4937.0	1833.6
40	3420.1	943.1	40	4137.4	1337.7	40	4951.5	1843.1
50	3431.4	948.9	50	4150.1	1345.1	50	4966.1	1852.6
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	73	4239.7	1398.0	83	5069.2	1920.5
10	3522.6	996.2	10	4252.6	1405.7	10	5084.0	1930.4
20	3534.1	1002.3	20	4265.6	1413.5	20	5099.0	1940.3
30	3545.6	1008.3	30	4278.5	1421.2	30	5113.9	1950.3
40	3557.2	1014.4	40	4291.5	1429.0	40	5128.9	1960.2
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	50	4383.3	1484.4	50	5234.9	2031.4
65	3650.2	1063.9	75	4396.5	1492.4	85	5250.3	2041.7
10	3661.9	1070.2	10	4409.8	1500.5	10	5265.6	2052.1
20	3673.7	1076.6	20	4423.1	1508.6	20	5281.0	2062.5
30	3685.4	1082.9	30	4436.4	1516.7	30	5296.4	2073.0
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	40	4530.4	1574.7	40	5405.6	2147.5
50	3780.4	1134.8	50	4544.0	1583.1	50	5421.4	2158.4
67	3792.4	1141.4	77	4557.6	1591.6	87	5437.2	2169.2
10	3804.4	1148.0	10	4571.2	1600.1	10	5453.1	2180.2
20	3816.4	1154.7	20	4584.8	1608.6	20	5469.0	2191.1
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	20	4667.4	1660.5	20	5565.4	2258.0
30	3901.2	1202.0	30	4681.3	1669.2	30	5581.6	2269.3
40	3913.4	1208.9	40	4695.2	1678.1	40	5597.8	2280.6
50	3925.6	1215.8	50	4709.2	1686.9	50	5614.2	2292.0
69	3937.9	1222.7	79	4723.2	1695.8	89	5630.5	2303.5
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	80	4807.7	1749.9	90	5729.7	2373.3
10	4024.4	1272.1	10	4822.0	1759.0	10	5746.3	2385.1
20	4036.8	1279.3	20	4836.2	1768.2	20	5763.1	2397.0
30	4049.3	1286.5	30	4850.5	1777.4	30	5779.9	2408.9
40	4061.8	1293.6	40	4864.8	1786.7	40	5796.7	2420.9
50	4074.4	1300.9	50	4879.2	1796.0	50	5813.6	2432.9

53° 42′ Santa Fe & With Sawyer

Table VIII.—Natural Trigonometrical Functions.

Angle	Sine.	Tan.	Cotg.	Cosin.	
° ′					
32	.5299	.6249	1.600	.84805	**58**
10	.5324	.6289	1.590	.84650	50
20	.5348	.6330	1.580	.84495	40
30	.5373	.6371	1.570	.84339	30
40	.5398	.6412	1.560	.84182	20
50	.5422	.6453	1.550	.84025	10
33	.5446	.6494	1.540	.83867	**57**
10	.5471	.6536	1.530	.83708	50
20	.5495	.6577	1.520	.83549	40
30	.5519	.6619	1.511	.83389	30
40	.5544	.6661	1.501	.83228	20
50	.5568	.6703	1.492	.83066	10
34	.5592	.6745	1.483	.82904	**56**
10	.5616	.6787	1.473	.82741	50
20	.5640	.6830	1.464	.82577	40
30	.5664	.6873	1.455	.82413	30
40	.5688	.6916	1.446	.82248	20
50	.5712	.6959	1.437	.82082	10
35	.5736	.7002	1.428	.81915	**55**
10	.5760	.7046	1.419	.81748	50
20	.5783	.7089	1.411	.81580	40
30	.5807	.7133	1.402	.81412	30
40	.5831	.7177	1.393	.81242	20
50	.5854	.7221	1.385	.81072	10
36	.5878	.7265	1.376	.80902	**54**
10	.5901	.7310	1.368	.80730	50
20	.5925	.7355	1.360	.80558	40
30	.5948	.7400	1.351	.80386	30
40	.5972	.7445	1.343	.80212	20
50	.5995	.7490	1.335	.80038	10
37	.6018	.7536	1.327	.79864	**53**
10	.6041	.7581	1.319	.79688	50
20	.6065	.7627	1.311	.79512	40
30	.6088	.7673	1.303	.79335	30
40	.6111	.7720	1.295	.79158	20
50	.6134	.7766	1.288	.78980	10
38	.6157	.7813	1.280	.78801	**52**
10	.6180	.7860	1.272	.78622	50
20	.6202	.7907	1.265	.78442	40
	Cosin.	Cotg.	Tan.	Sine.	Angle.

Angle	Sine.	Tan.	Cotg.	Cosin.	
° ′					
30	.6225	.7954	1.257	.78261	30
40	.6248	.8002	1.250	.78079	20
50	.6271	.8050	1.242	.77897	10
39	.6293	.8098	1.235	.77715	**51**
10	.6316	.8146	1.228	.77531	50
20	.6338	.8195	1.220	.77347	40
30	.6361	.8243	1.213	.77162	30
40	.6383	.8292	1.206	.76977	20
50	.6406	.8342	1.199	.76791	10
40	.6428	.8391	1.192	.76604	**50**
10	.6450	.8441	1.185	.76417	50
20	.6472	.8491	1.178	.76229	40
30	.6494	.8541	1.171	.76041	30
40	.6517	.8591	1.164	.75851	20
50	.6539	.8642	1.157	.75661	10
41	.6561	.8693	1.150	.75471	**49**
10	.6583	.8744	1.144	.75280	50
20	.6604	.8796	1.137	.75088	40
30	.6626	.8847	1.130	.74896	30
40	.6648	.8899	1.124	.74703	20
50	.6670	.8952	1.117	.74509	10
42	.6691	.9004	1.111	.74314	**48**
10	.6713	.9057	1.104	.74120	50
20	.6734	.9110	1.098	.73924	40
30	.6756	.9163	1.091	.73728	30
40	.6777	.9217	1.085	.73531	20
50	.6799	.9271	1.079	.73333	10
43	.6820	.9325	1.072	.73135	**47**
10	.6841	.9380	1.066	.72937	50
20	.6862	.9435	1.060	.72737	40
30	.6884	.9490	1.054	.72537	30
40	.6905	.9545	1.048	.72337	20
50	.6926	.9601	1.042	.72136	10
44	.6947	.9657	1.036	.71934	**46**
10	.6967	.6713	1.030	.71732	50
20	.6988	.9770	1.024	.71529	40
30	.7009	.9827	1.018	.71325	30
40	.7030	.9884	1.012	.71121	20
50	.7050	.9942	1.006	.70916	10
	.7071	1.	1.	.70711	**45**
					° ′
	Cosin.	Cotg.	Tan.	Sine.	Angle.

144.00
12.6
131.40

115
120

3178
7.05
24.73

Table IX.—Calculation of Earthwork.

Width	HEIGHT 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w =16.2 and h =5.3, cu. yds. =1.48+.028+.089 =1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) =h, and ½ the roadbed =w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

53°42
2/107-24

20.35
46
15.75

204
46
15.8

21.36
41
16.3

5:1

20.4
41
16.3

21.4
51

21.4
57
15.7

2.4
5.1
16.3

21.4
55
15.9

20.4
46
15.8

20.4
41
16.3

57+19.84
+430
36.84

5

21.4
41
16.3

21.9

21.4
49
16.5

20.4
41
16.3

21.4
53
16.1

20.4
44
16.0

21.4
49
16.5

20.4
16.1
4.3

20.4
16.5
3.9

9:40
19 20

31.84
7.08
24.76

25.96
5.88
31.84

5.88

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

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

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

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