

Stac	Course	Dist	N	S	E	W	N+	N ^o 1 E+		N	S	E	W	X	N ^o 2	
0+00	S 323W	90.5		90.3		5.3	00	00	43+91°S 46°06'W	115.0			79.7	✓ 82.9	-31549-1533.6	
0+90	S 3707W	66.0		52.6		39.8	-90.3	-451	45+06°S 68°38'W	72.8			26.5	✓ 67.8	-32346-1616.5	
1+56	S 1132W	107.0		104.8		21.4	-142.9	-66.5	45+78°N 70°37'W	91.1	30.2			✓ 85.9	-32611-1684.3	
2+63	S 226W	75.1		75.0		3.2	-247.7	-69.7	46+69°N 51°13'W	53.0	33.2			✓ 41.3	-32309-1770.2	
3+38	S 3253W	156.5		131.4		85.0	-322.7	-154.7	47+22°S 46°35'W	330.9.7			2274.8	✓ 240.4.1	-31977-1811.5	
4+95	S 5128W	228.6		142.4		178.8	-454.1	-333.5	80+32°S 25°30'W	61.6			55.6	✓ 26.5	-54725-4215.6	
7+23	S 2417E	68.1		62.1	28.0		-596.5	-305.5	80+94°S 1°49'W	68.0			68.0	✓ 22	-55281-4242.1	
7+91	S 3731E	161.9		128.4	98.6		-658.6	-206.9	81+62°S 8°29'W	66.6			65.8	✓ 9.8	-55961-4244.3	
9+53	S 306W	179.7		179.4		9.7	-787.0		82+28°S 5°28'E	75.3			75.0	7.2 ✓	-56619-4254.1	
11+33	S 7403W	177.3		172.0		43.0	-966.4	-216.6	83+04°S 4°30'W	106.3			106.0	✓ 8.3	-57369-4246.9	
13+10	S 917E	200.3		197.7	32.3		-1138.4	-259.6	84+10°S 44°47'W	99.0			70.3	✓ 69.7	-58429-4255.2	
15+11	S 1920W	271.0		255.7		89.7	-1336.1	-227.3	85+09°S 14°35'E	150.1			145.3	37.8 ✓	-59132-4324.9	
17+82	S 5755W	79.9		42.9		67.7	-1591.8	-317.0	86+59°S 6°55'E	122.1			121.2	14.7	-60585-4287.1	
18+61	S 1917W	55.3		52.2		18.3	-1634.7	-384.7	87+81°S 2°38'W	125.8			125.7	✓ 5.8	-61797-4272.4	
19+17	S 2242W	147.4		136.0		56.9	-1686.9	-403.0	89+07°S 20°17'W	94.3			88.4	✓ 32.7	-63054-4278.2	
20+64	N 8840W	99.9	2.3			99.9	-1822.9	-459.9	90+01°S 12°38'E	98.1			95.7	21.4 ✓	-63938-4310.9	
21+64	S 5256W	71.2		42.9		56.8	-1820.6	-559.8	90+99° East	84.3			84.3	✓	-64895-4289.5	
22+35	S 4903W	129.6		84.9		97.9	-1863.5	-616.6	91+84°S 74°10'E	40.4			11.0	38.9 ✓	-64895-4205.2	
23+65	S 7938W	76.4		13.7		75.1	-1948.4	-714.5	92+24°S 56°45'E	46.7			25.6	39.1 ✓	-65005-4166.3	
24+71	N 8146W	102.2	14.6			101.1	-1962.1	-789.6	92+71°S 5°25'W	75.6			75.3	✓ 7.1	-65261-4127.2	
25+43	N 5232W	146.0	88.8			115.9	-1947.5	-890.7	93+46°S 28°43'E	99.7			87.4	47.9 ✓	-66014-4134.3	
26+89	N 6900W	146.7	52.6			136.9	-1858.7	-1006.6	94+46°S 35°07'W	45.9			37.5	✓ 26.4	-6688.8-4086.4	
28+36	S 1542W	95.0		91.5		25.7	-1806.1	-1143.5	94+92°S 73°31'W	65.6			18.6	✓ 62.9	-6726.3-4112.8	
29+31	S 2913W	108.5		94.7		53.0	-1897.6	-1169.2	95+58°S 47°45'W	123.1			82.8	✓ 91.1	-6744.9-4175.7	
30+40	S 109W	82.4		82.4		1.7	-1992.3	-1222.2	96+81°S 32°24'W	76.4			64.5	✓ 40.9	-6827.7-4266.8	
31+22	S 4456E	116.6		82.5	82.3		-2074.7	-1223.9	97+57°S 24°09'W	84.1			76.7	✓ 34.4	-6892.2-4307.7	
32+39	S 2335E	65.5		60.0	26.2		-2157.2	-1141.6	98+41°S 11°09'E	63.4			62.2	123 ✓	-6968.9-4342.1	
33+04	S 417W	94.5		94.2		7.1	-2217.2	-1115.4	99+05°						-7031.1-4329.8	
33+99	S 1946W	77.7		73.7		26.3	-2311.4	-1122.5					63.4	39.39.6	303.6	3099.8
34+76	S 3719W	76.5		60.8		46.3	-2384.5	-1148.8					106.2		150.7	
35+53	S 5434W	54.9		31.8		44.7	-2445.3	-1195.1					3833.4		2949.1	
36+08	S 3605W	137.1		110.8		80.7	-2477.1	-1239.8					63.4		305.9	
37+45	S 514E	156.8		156.1	14.3		-2587.9	-1320.5					3770.0		2643.2	
39+02	S 1208W	99.5		97.3		20.9	-2744.0	-1306.2					3770.0		2647.6	
40+01	S 2242W	221.7		204.5		85.6	-2841.8	-1327.1							4.4	
42+23	S 3859W	88.2		68.6		55.4	-2945.8	-1412.7								
43+11	S 5529W	79.5		45.0		65.5	-3114.4	-1468.1								
			1583				-3159.4	-1533.6								

Add 4.5

					add 45'		NR 3							NR 4				
N	S	E	W						N	S	E	W						
55+78 ⁵	S 28° 01' W	1331.1		✓ 625.3	-32611	-16843			92+16 ³	S 24° 34' E	77.4		704	322	✓	-6418.8	-3332.9	
59+09 ²	S 3° 41' W	37.8		✓ 2.4	-4436.2	-23096			92+93 ²	S 5° 08' W	91.3		90.9	✓	8.2	-6348.4	-3300.7	
59+47 ²	S 41° 08' E	66.3		✓ 43.6	-44739	-23120			93+85 ²	S 31° 0' W	83.8		83.7	✓	4.6	-6257.5	-3308.9	
60+14 ²	S 29° 26' E	71.8		✓ 35.3	-45238	-22684			94+68 ²	S 17° 57' E	58.4		556	18.0	✓	-6173.8	-3313.5	
60+85 ²	S 55° 17' E	116.3		✓ 95.6	-45863	-22331			95+27 ²	S 35° 17' E	81.6		66.6	47.1	✓	-6118.2	-3295.5	
62+02 ¹	S 37° 37' E	112.0		✓ 68.4	-46525	-2137.5			96+08 ²	S 6° 22' E	86.0		85.5	9.5	✓	-6051.6	-3248.4	
63+14 ¹	S 13° 48' E	138.7		✓ 33.1	-47412	-20691			96+94 ²	S 71° 5' W	161.1		1598	✓	20.2	-5966.1	-3238.9	
64+52 ²	N 87° 29' W	126.3	5.5	✓ 126.2	-48759	-2036.0			98+52 ²	S 35° 16' W	185.1		151.1	✓	106.9	-5806.3	-3259.1	
65+79 ¹	S 86° 19' W	120.2		✓ 119.9	-48704	-2162.2			100+41 ²	S 12° 52' W	105.7		103.0	✓	23.5	-5655.2	-3366.0	
66+99 ²	S 67° 32' W	59.8		✓ 55.3	-48781	-2282.1			101+46 ²	S 70° 58' W	109.0		35.5	✓	103.0	-5552.2	-3389.5	
67+59 ²	S 35° 25' W	58.8		✓ 34.1	-49010	-2337.4			102+52 ²	N 83° 22' W	55.6	64		✓	55.2	-5516.7	-3492.5	
68+17 ²	S 55° 58' W	97.7		✓ 80.9	-49489	-2371.5			103+11 ²	S 82° 36' W	72.7		94	✓	72.1	-5523.1	-3547.7	
69+15 ²	N 70° 21' W	95.6	32.1	✓ 90.0	-50036	-2452.4			103+84 ²	N 52° 06' W	47.6	29.2		✓	37.6	-5513.7	-3619.8	
70+11 ²	N 83° 59' W	115.7	12.1	✓ 115.1	-49715	-2542.4			104+31 ²	N 81° 43' W	95.9	13.8		✓	94.9	-5542.9	-3657.4	
71+26 ²	S 78° 12' W	94.4		✓ 92.4	-4959.4	-2657.5			105+27 ²	N 57° 08' W	48.5	26.3		✓	40.7	-5556.7	-3752.3	
72+21 ²	S 66° 03' W	61.8		✓ 56.5	-49787	-2749.9			105+76 ²	N 31° 25' W	86.3	73.6		✓	45.0	-5583.0	-3793.0	
72+83 ¹	S 84° 15' W	64.7		✓ 64.4	-50038	-2806.4			106+62 ²	S 68° 55' W	100.7		362	✓	94.0	-5656.6	-3838.0	
73+47 ²	S 78° 10' W	64.8		✓ 63.4	-50103	-2870.8			107+63 ²	N 79° 30' W	59.6	10.9		✓	58.6	-5620.4	-3932.0	
74+12 ²	S 88° 30' W	47.8		✓ 47.8	-50236	-2934.2			108+22 ²	N 62° 14' W	95.6	44.5		✓	84.6	-5631.3	-3990.6	
74+60 ²	S 76° 09' W	67.9		✓ 65.9	-50248	-2982.0			109+18 ²	N 32° 49' W	36.8	30.9		✓	19.9	-5675.8	-4075.2	
75+28 ²	S 80° 33' W	96.5		✓ 95.2	-5041.1	-3047.9			109+55 ²	N 86° 14' W	84.9	5.6		✓	84.7	-5706.7	-4095.1	
76+24 ²	S 9° 32' E	52.5		✓ 8.7	-5056.9	-3143.1			110+39 ²	N 64° 02' W	122.8	53.6		✓	110.4	-5712.3	-4179.8	
76+77 ²	S 20° 13' E	144.3		✓ 49.9	-5108.7	-3134.4			111+62 ²	N 45° 43' W	58.2	40.6		✓	41.7	-5765.9	-4290.2	
78+21 ²	S 17° 28' E	131.1		✓ 39.3	-5247.1	-3084.5			112+20 ²	= 99+05 ² = 91+90 ²			335.4	947.7	1068	11058	-5806.5	-4331.9
79+52 ²	S 12° 24' E	110.7		✓ 23.8	-5369.2	-3045.2							49.7	3207.4	509.4	20160		
80+63 ²	S 26° 33' W	45.8		✓ 20.5	-5477.3	-3021.4							385.1	4155.1	6162	32638		
81+09 ²	S 53° 47' W	92.3		✓ 74.5	-5518.3	-3041.9							385.1		6162			
82+01 ²	S 49° 45' W	126.5		✓ 96.5	-5572.8	-3116.4							3770.0		26476			
83+28 ²	S 40° 09' W	91.7		✓ 59.1	-5654.5	-3212.9												
84+19 ²	S 61° 11' W	109.9		✓ 96.3	-5724.6	-3272.0												
85+29 ²	S 37° 20' W	84.8		✓ 51.4	-5777.6	-3368.3												
86+14 ²	S 6° 23' E	114.8		✓ 128	-5845.0	-3419.7												
87+29 ²	S 9° 29' E	86.7		✓ 14.3	-5959.1	-3406.9												
88+15 ²	S 73° 5' W	188.5		✓ 24.9	-6044.6	-3392.6												
90+04 ²	S 9° 47' E	102.6		✓ 17.4	-6231.5	-3417.5												
91+07 ²	S 37° 57' E	109.3		✓ 67.2	-6332.6	-3400.1												
					-6418.8	-3332.9												
					49.7	3207.4	509.4	21580										
					509.4	21580												

3474.0
 3474.0
 add 45'

	N	S	E	W	odd 45'	N=5	
0+00 N24°15'E	61.6	56.2	25.3v		14516.5		
0+61 N38°39'W	116.9	91.3	v 73.0		-13291.9	-6997.0	
1+78 N32°31'E	111.6	94.1	60.0v		14460.3	-13235.7	-6971.7
2+90 N11°39'E	243.8	238.8	49.2v		14369.0	-13144.4	-7044.7
5+33 N12°58'E	243.7	237.5	54.7v		14274.9	-13050.3	-6984.7
7+77 N71°12'W	130.9	42.2	v 123.9		14036.1	-12811.5	-6935.5
9+08 N46°18'W	151.5	104.7	v 109.5		13798.6	-12574.0	-6880.8
10+60 N55°19'W	136.6	77.7	v 112.3		13756.4	-12531.8	-7004.7
11+96 N68°51'W	208.9	75.4	v 194.8		13651.7	-12427.1	-7114.2
14+05 N47°50'E	90.1	60.5	v 66.8		13574.0	-12349.4	-7226.5
14+95 N42°40'E	165.5	121.7	112.2v		13498.6	-12274.0	-7421.3
16+61 N79°52'E	155.6	27.4	153.2v		13438.1	-12213.5	-7354.5
18+16 N75°00'E	228.5	59.1	220.7v		13316.4	-12091.8	-7242.3
20+45 N54°52'E	78.1	44.9	63.9v		13289.0	-12064.4	-7089.1
21+23 N39°24'E	130.4	100.8	82.8v		13229.9	-12005.3	-6868.4
22+53 N 64°7'W	86.8	8.62	v 10.2		13185.0	-11960.4	-6804.5
23+42 N16°41'W	91.4	87.5	v 26.2		13084.2	-11859.6	-6721.7
24+31 N35°32'E	77.2	6.28	44.9v		12998.0	-11773.4	-6731.9
25+09 N53°19'E	93.7	56.0	75.2v		12910.5	-11685.9	-6758.1
26+02 N 00°4'E	73.5	73.5	v		12847.7	-11623.1	-6713.2
26+76 N73°05'W	139.5	40.6	v 133.5		12791.7	-11567.1	-6638.0
28+15 N47°44'W	80.9	54.5	v 59.9		12718.2	-11493.6	-6638.0
28+96 N35°22'E	105.5	8.60	61.1v		12677.6	-11453.0	-6771.5
30+02 N12°33'E	104.7	102.2	22.7v		12623.1	-11398.5	-6831.4
31+06 N26°06'W	98.3	88.3	v 43.2		12537.1	-11312.5	-6770.3
32+05 N24°49'E	162.7	147.7	68.3v		12434.9	-11210.3	-6747.6
33+67 N29°40'E	121.0	105.1	59.9v		12346.6	-11122.0	-6790.8
34+28 N 23°9'W	67.5	67.4	v 3.1		12198.9	-10974.3	-6722.5
35+56 N25°49'E	144.36	129.5	62.87v		12093.8	-10869.2	-6662.6
50+00 N58°40'E	585.0	304.2	499.7v		12026.4	-10801.8	-6665.7
55+85 N16°45'E	245.0	234.6	70.6v		10726.9	-9502.3	-6037.0
58+30 N13°28'E	553.0	537.8	128.8v		10422.7	-9198.1	-5537.3
63+82 N17°40'E	528.0	503.1	160.2v		10188.1	-8963.5	-5466.7
69+10 N19°19'E	902.0	851.2	298.4v		9650.3	-8425.7	-5337.9
78+12 N23°24'E	1378.3	1264.9	547.4v		9147.2	-7922.6	-5177.7
90+90 = 99+05 = 112+20			3554.7 8896		8296.0	-7071.4	-4879.3
					7031.1	-5806.5	-4331.9

Add 10246 to all these OK

Traverse notes on El Monte to Lankeashim Tunnels - Cuyamaca Water Co. Filmm Line.

Shuts # 1 + 2 runs from El Monte Tunnel south to Lake View Syphon Sta. 99+05

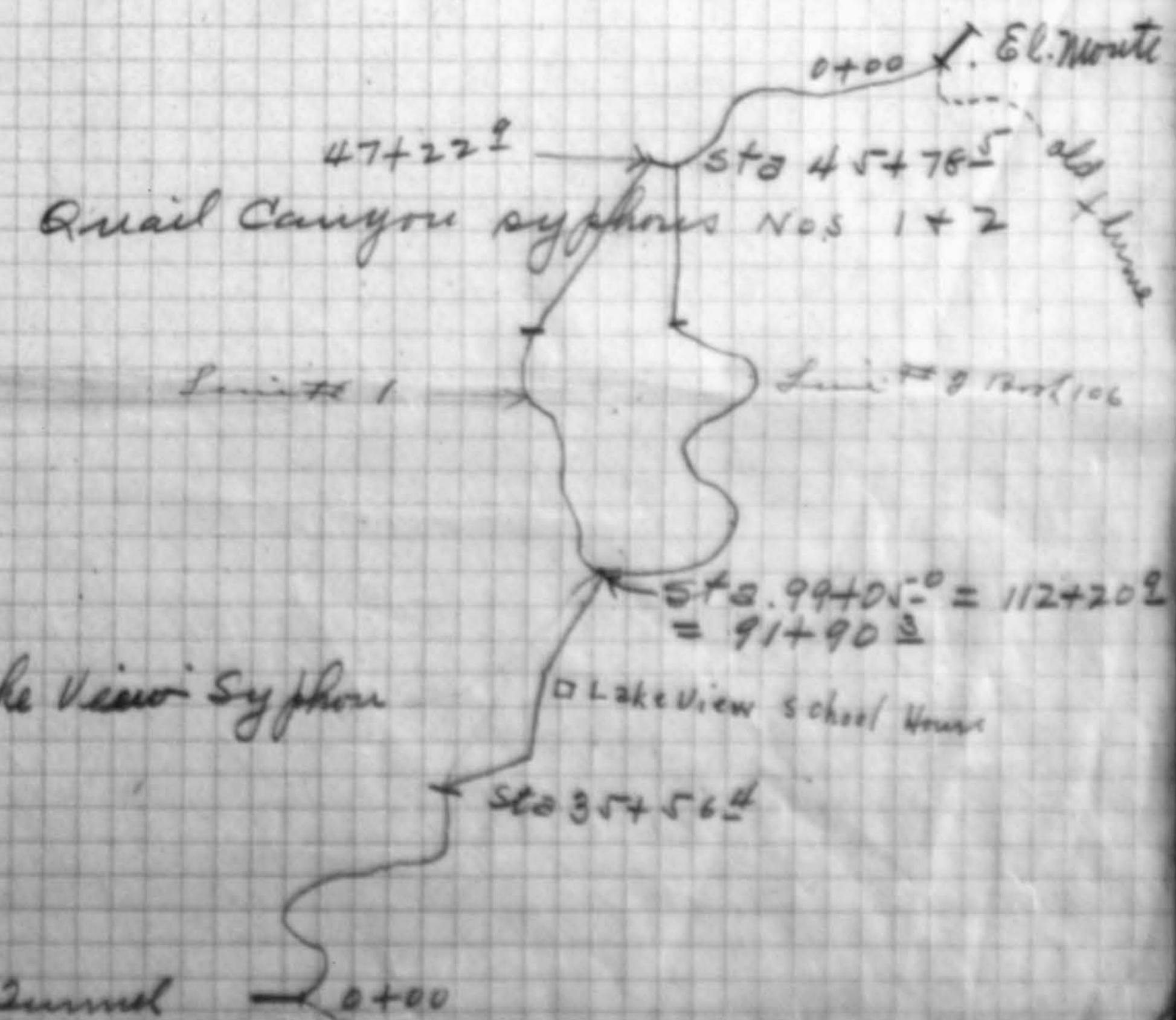
Shuts # 3 + 4 runs south from Sta. 45+78 of shut # 2 to Sta 112+20 = Sta 99+05 shut # 2 (this line is noted as Quail Canyon Line # 2 Book 106

shut # 5 runs north from Lankeashim Tunnel to Sta 91+90 = 99+05 = 112+20 shuts 3 + 4.

Traverse on shut # 5 is figured from north to south so that in platting the courses will have to be changed to read in the diagonally opposite quadrants.

Curve line from Sta 45+78 shuts # 3+4 for platting line to Lankeashim Tunnel.

Cuyamaca Note Books Nos. 105 + 106



Lankeashim Tunnel 0+00

C.W. Co.
Traverse Notes & Proposed Change
of Thune
Bet El Monte & Laukershine Thune
Platted

McFadden.
Jan-1915

Cross Section Notes.

Excavation of

Cuyamaca Flume.

CUYAHOGA FLUME			Excavation			Sheet No 1		
Sta	Area	Ydgs	d.g.	S.R.	C.G.	Pip Rod	Dry Wall	
0+00	TR Bents	30	30					
1+00	1200	44.5	44.5					
2+00	2900	109.4	109.4					
3+00	6900	255.6	255.6					
4+00	3250	120.4	120.4					
4+50	1750	64.8	64.8					
5+00	3450	127.8	127.8					
5+50	Work area 5700	30.0 211	30.0 211.0				5.6	
6+00	13500	500	365.0	10.0	125.0			
7+00	10750	398.1	199		199.1			
8+00	5000	185.2	166.7	18.5				
9+00	4440	164.5	164.5					
9+80	6000	222.2	177.8	44.4				
11+00	2600	96.3	24.1	72.2				
11+65	4292.5	159.0	79.5	79.5				
12+50	2000	74.2	37.1	37.1				
13+00	5250	194.8	116.9	77.9				
14+00	14200	526.0	313.6	210.4				
16+00								
16+20	7600	281.5	112.6	168.9			5	
17+00	7000	259.5	64.9	194.6				
18+00	5500	203.9	51.0	152.9				
19+00	4950	183.3	73.3	110.0				
20+00	4550	168.5	168.5					
21+00	3850	142.7	121.3			21A		
22+00	4550	168.5				168.5		
23+00	5700	192.6	96.3			96.3		
24+00	4500	166.7	166.7			610.3		
25+00	10200	377.8	377.8					
27+00	10200	377.8	370.7	7.1				
29+00	9100	337.0	337.0					
31+00	8300	307.4	307.4					
33+00	4800	177.8	177.8					
35+00	4200	155.5	155.5					
37+00	7350	272.2	272.2					
40+00	5850	216.7				Earth 216.7		
42+00	1875	69.4				69.4		
43+00		20	20.0					
44+00	875	32.4	32.4					
44+25	375	32.4	32.4					
44+50								
Total		7633.4	5575.0	1134.0	286.1		18.6	

Sta	Ydgs	Earth	d.g.	S.R.				SHEET N°2.
44+90								
45+50	25.0		25.0					
46+50	111.1		111.1					
46+70	130		130					
48+00								
48+50	27.8		27.8					
49+00	69.5		17.4	52.1				
49+50	93.5		46.8	46.7				
50+00	75.9		75.9					
50+20	9.6		9.6					
50+90								
51+50	38.9		38.9					
53+00	194.5		194.5					
54+00	129.6		129.6					
54+25	16.2		16.2					
55+50								
56+50	48.2		48.2					
57+00	66.2		66.2					
57+50	60.2		60.2					
58+50	84.3		84.3					
59+50	61.1		61.1					
62+00	122.7	122.7						
64+00	150.0	150.0						
65+00	75.0		75.0					
65+10	3.6		3.6					
67+50	T.E. 20.0	20.0						
68+00	59.3		59.3					
68+50	91.7		91.7					
70+00	252.8		252.8					
72+00	440.8		440.8					
73+00	153.7		153.7					
74+00	101.9		101.9					
75+00	431.5		431.5					
76+00	1327.0		1061.6	265.4				
76+50	817.2		653.8	163.4				
77+00	327.1		320.2	6.9				
79+00	T.E. 30.0		30.0					
80+00	41.7		41.7					
81+00	67.6		67.6					
81+25	152.8		152.8					
81+75								
Total	5811.0	302.7	4963.8	544.5				

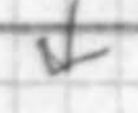
Sta	ydge	Earth	d granite	Solid R.	Sheet No 3.
81+75					
82+50	152.8		152.8		
83+25	68.1		68.1		
84+00	58.3	58.3			
85+00	35.2	35.2			
86+50	87.5	87.5			
87+50	60.2	60.2			
88+00	12.0	12.0			
88+30					
89+70	15.6		15.6		
89+00	11.7		11.7		
89+50					
90+00	25.9		25.9		
90+50	45.4		45.4		
90+65	5.8		5.8		
91+10					
91+50	15.6		15.6		
92+50	63.0		63.0		
93+50	63.0		63.0		
94+00	49.5		49.5		
94+50	30.1		30.1		
94+75					
95+05	25.3		25.3		
95+40	29.5		29.5		
95+70					
96+00	27.2		27.2		
96+20	18.1		18.1		
97+00	T.E. 20.0		20.0		
97+50	32.4		32.4		
98+50	149.1		149.1		
100+00	321.0		321.0		
101+00	201.9		201.9		
102+00	198.1		125.0	13.9	
102+30	63.3		25.3	38.0	
103+00	10.11		20.2	80.9	
104+00	T.E. 20.0		20.0		
104+50	51.9		51.9		
105+50	192.6		192.6		
106+50	200.0		200.0		
107+50	211.1		211.1		
Total	2603.1	250.2	2217.1	132.8	

Sta	ydge	Earth	d granite	Solid R.	depression	Back Fill	Sheet No 4.
107+50							
108+00	64.8		64.8		30.0		
108+50	79.6		59.7	19.9			
109+50	263.0		222.2	40.8			
110	118.5		88.9	29.6			
110+40	189.6		161.2	28.4			
110+80	148.2		133.4	14.8			
112+22	T.E. 20		20.0				
112+52	133.3		133.3				
112+66	62.2		62.2				
112+66	1079.2		945.7	133.5			Tunnel No 1
115+90	25177.0	9+3.8	20462.3	3360.6	40.6		
115+95	33.3		33.3				
116+42	504.9		504.9				
140+06							
140+50	97.8		97.8			100.0	
141+00	259.3		129.7	129.6			
141+50	277.8		111.1	166.7			
142+00	213.0		191.9	21.3			
142+50	142.6		142.6				
142+80	35.6		35.6				
143+70							
144+00	14.4		14.4				
146+00	207.4		207.4				
146+40	22.2		22.2				
146+85							
147+50	43.3		43.3				
148+50	155.6		155.6				
149	10.55		9.63				
150	187.1		187.1				
151	149.1		149.1				
152	162.1		162.1				
153	155.6		155.6				
153+50	90.7		90.7				
153+80	31.1		31.1				
154+15							
155+00	66.1		66.1				
156	135.6		135.6				
156+25	48.6		48.6				
156+50	29.1		29.1				
156+90							
Total	4257.8		3306.7	451.1	30.0	100.0	

Sheet No. 5					
Sta	yd	Earth	d.g.	S.R.	dry well
156+90					
	256		256		
157+13					
	1732		1732		
158					
	810		810		
+50					
	695		695		
159					
	713		713		
+50					
	78		78		
+60					
160+15					
	270				
	272		272		
+50					
	823				
	1019		1019		
161					
	995		995		
+50					
	551		551		
162					
	TE. 15		15		
+50					
	972		875	97	
163					
	2269		2042	227	
+50					
	1556		1245	311	
164+10					
	TE. 150			150	
+50					
	1232		1232		
165+00					
	3713		3527	186	
166					
	4723		4723		
168					
	590				
	922		922		
+65					
	1358.8		1222.9	1359	
169+50					
	11816		11225	591	
170+50					8.0
171					
	332		332		
+50					
	1833		1833		
172+50					
	1059		1059		
+90					
	593		593		
173+30					
	421		421		
174+00					
	963		963		
175					
	144		144		
+40					
175+75					
	198				
	148		148		
176					
	718		620		
	620				
176+50					
	130		130		
176+70					
177+15					
	1430				
	466		466		
178					
	1759		1759		
178+50					
	1917		1917		
179					
	2778		2778		
180					
	2778		2778		
Total	61041		58120	2921	8.0

Sheet No. 6.					
Sta	yd	Earth	d.g.	S.R.	dry well
180+00					
	232		232		
+30					
	635		635		5.0
181					
	1463		1463		
182					
	1175		1175		
+50					
	906				
	1093		1093		
183					
+25					
	542		542		
184					
	945		945		
+50					
	2528		2528		
185					
	1789		1789		
+20					
	506		506		
+30					
	1090.9		1090.9		5.0
187+50					
	438		438		
+57					
	2986		2986		
188					
	428		428		
+35					
	TE. 300		300		
189+15					
	1167		1167		
+50					
	4889		4889		
190+50					
	7334		7334		
191+50					
	1733		1733		
191+80					
	TE. 50.0		TE. 50.0		
192+50					
	833		833		
193					
	1611		1611		
193+50					
	4195		4195		
194					
	1579		1579		
+50					
	1778		1778		
196+00					
	982		589	393	
+50					
	2722		2450	272	10.0
197+50					
	2593		2593		
198+50					
	931		466	465	
199					
	139		139		
+20					
					25.0
199+60					
	448		224	224	
200					
	1144		1144		
201+50					
	2074		2074		
202+50					
	733		733		
204					
	556		222	334	
+50					
	111		44	67	
204+70					
	156		156		35.0
205+40					
Total	52712		51357	1755	750 600

600 Tunnel 17⁰²



Sheet N°7

Sta	Ydge	Earth	d.g.	S.R.	dryWall
205+40	156		156		
206	56.5		45.2	11.3	
207	54.2		27.1	27.1	
+50	71.3		71.3		
208	48.6		48.6		
+75					
209					
+50	32.4		32.4		100
210	52.8		52.8		
+75	72.2		72.2		100
211	139		139		
212	FE. 30.0		30.0		
+50	90.7		90.7		
213+50	337.1		337.1		
214	156.0		156.0		
+35	54.8		54.8		
+90					
215+50	93.3		93.3		
216+50	288.0		144.0	144.0	
217+50	234.3		175.7	58.6	
218	291.7		218.8	72.9	
+50	106.5		79.9	26.6	
+75	30.1		22.6	7.5	
220+25					
220+50	23.2		23.2		
221	91.8		53.8	18.0	
222	150.9		135.8	15.1	
+50	133.3		133.3		
223	193.7		193.7		
224	331.9		331.9		
+55	270.8		243.7	27.1	
226	366.3		366.3		
227	195.4		195.4		
+35	76.2		76.2		
+65	40.0		40.0		
228					
+25	44.4		44.4		
229	269.5		269.5		
230	422.3		422.3		
+25	60.2		60.2		
Total	4779.9		4371.7	4052	200

Sheet N°8

Sta	Ydge	Earth	d.g.	S.R.	dryWall
230+25					
+65	FE. 30.0		30.0		
231	33.3		13.3	20.0	
231+35	54.4		27.2	27.2	
231+50	8.7		4.4	4.3	
+90					
232	5.6		5.6		
233	211.1		211.1		
+40	47.4		47.4		
+90	FE. 20.0		20.0		
234	8.9		8.9		
+50	105.6		105.6		
236	737.6		737.6		
+55	203.2		203.2		
237+40	FE. 30.0		30.0		
237+70	27.8		27.8		
238+50	154.1		154.1		
240	367.6		330.8	36.8	
+90	209.2		167.4	41.8	
241+10	22.4		20.2	2.2	
+60					
242	24.4		19.5	4.9	
243+50	290.4		291.4		
244+50	193.5		183.9	9.6	
245+00	69.5		69.5		
245+20	15.6		15.6		
246+65	FE. 60		60		
247+00	44.4		44.4		
248+50	294.5		294.5		
249	123.6		123.6		
249+75	243.8		243.8		
250	36.1		36.1		
250+40	FE. 15.0		15.0		
+70	85.6		85.6		
251+20	190.8		190.8		
+50	102.2		102.2		
+70	48.9		48.9		100
+80					
252+20	328.2		328.2		
252+75	452.3		452.3		
Total	4741.9		4594.9	1468	100

Sta	Ydge	Earth	d.g.	S.R.	dryWall	Sheet No 9.
252+75						
253+50	354.2		354.2			
255	44.7		44.7			
256+50	48.6		48.6			
+75	61.6		61.6		12.0	
257+20	361		32.5	3.6		
257+50	301.0		301.0			
258+80	38.9		38.9			
259+15						
259+25	6.9		6.9			
+50	78.7		78.7			
260	33.3		33.3			
+30					5.0	
+60	47.8		38.2	9.6		
261	59.7		35.8	23.9		
+50						
262+30	16.3		14.7	1.6		
262+50	192.6		144.4	48.2		
263+50	422.3		422.3			
265+50	75.5		75.5			
267+00	85.6		85.6			
+70	32.1		32.1			
268+15					40.0	
268+50	88.9		88.9			
269+30	77.8		77.8			
270	60.3		48.2	12.0		
270+50	120.4		108.4	12.0		
271+50					35.0	
271+75	8.3		4.2	4.1		
272	8.3		8.3			
272+25	TE 40.0		40.0			
273+50	175.0		140.0	35.0		
273+85	250.0		175.0	75.0		
274+35	TE 60.0		60.0			
275+65	54.2		54.2			
276+00	211.1		211.1			
277	19.4		19.4			
+35	15.0		15.0			
278	30.0		30.0			
278+40	315.7		292.7	23.0	92.0	

Sta	Ydge	Earth	d.g.	S.R.	dryWall	SHEET No 10
278+40						
279	83.9		83.9			
+15	9.7		9.7			
+45						
+60	9.7		9.7			
281	50.4		47.9	2.5		
+25	15.3		15.3			
+50						
282	48.2		48.2			
283+25	240.8		240.8			
+80	53.0		53.0			
284+20						
+50	31.1		31.1			
286	272.2		258.6	13.6	5.0	
287+50	283.4		255.1	28.3		
+75	27.8		27.8			
288						
+50	37.5		35.1	1.9		
290	95.8		86.2	9.6		
292	401.9		381.8	20.1		
294	311.1		280.0	31.1		
295	179.6		161.6	18.0		
+50	100.0		95.0	5.0		
+80	27.5		24.7	2.8		
296+25	TE 20.0		20.0			
296+50	22.2		20.0	2.2		
297+50	237.1		189.7	47.4		
299	322.2		322.2		5.0	
300	196.3		196.3			
+20	25.9		25.9			
+50						
301	45.4		45.4			
302+50	244.5		244.5			
304	162.5		162.5			
305	102.8		102.8			
306+90	520.8		520.8			
309+50	977.5		879.7	97.8		
310	84.3		42.2	42.1		
310+80	TE 40.0		40.0			
311+25	58.3		49.6	8.7		
Total	5338.7		5007.6	331.1	10.0	

Sta	Ydge	Earth	d.g.	S.R.	dryWall	Sheet 17° 11
311+35						
312	1250		1250			
313	1185		1185			
314	1815		1724	91		
316+50	9816		9816			
317	1000		900	100		
+20	207		166	41		
317+75	TE 150		150			
318	454		454			
320	5463		5190	273		
322	3519		2815	704		
324	3463		2944	519		
326	4223		4012	211		
+50	611		550	61		
327+25	TE 150		150			
327+50	421		379	42		
328	843		759	84		
+25	278		278			
+50	3000		2850	150		
330	3000		2700	300		
331+50	556		473	83	100	
332	611		519	92		
+50	4223		4223		200	
333	4000		3600	400		
337	1000		950	50		
+90	250			250		
338+85	97		97			
339	2408		2408			
341	3519		3343	176		
343	3519		3343	176	50	
345	3334		3001	333		
347	4111		3494	617		
348+85	3504		2229	1275	50	
351	1611		1530	81		
352+50	2408		2408			
354+50	3222		2739	483		
356+50	1741		1741			
357+30						
Total	80962		75470	5492	400	

Sta	Ydge	Earth	d.g.	S.R.	dryWall	Concrete	Sheet 17° 12
357+30							
371+65							
373	237.5		237.5				
375	979.4		354.7	187			
376+50	445.9		401.3	44.6			
377	69.5		66.0	3.5			
378+50	TE 30.0		30.0				
379	42.1		42.1				
381	350.0		350.0				
382+50	236.1		236.1				
383	33.3		33.3				
384+20	TE 20.0		20.0				
384+50	27.2		24.5	2.7			
386	97.2		97.2				
+40	41.5		37.3	4.2			
388+50	TE 200.0			200.0			
389	42.1		42.1				
391	372.3		372.3				
392+50	352.8		317.5	35.3			
393	150.9		150.9				
+50	843		843				
397	TE 250.0		250.0				
+150	3456.1		3147.1	3090			H03.
399	72.2		72.2				
401	394.5		374.8	19.7			
401+70	524.0		497.8	26.2	27.0		
402+20	TE 300.0		300.0				
403+20	193.8		193.8				
404	51.4		41.2	10.2			
406	402+20		25.0				
408	TE 25.0		25.0				
410	77.0		77.0				
413+25	457.4		457.4				
413+60	385.2		385.2				
414+10	171.3		171.3				
415+75	188.9		188.9				
416	92.69		83.42	9.27			
417	146.2		146.2				
419	29.2		29.2				
Total	78498		73920	4578	270		

Sta	Ydge	Earth	d.g.	S.R.	dry Wall
419	TF 20		20.0		
	244.5		232.3	12.2	
421			126.6	6.7	
422			17.59	9.2	
423			179.6		
424			132.0	6.9	
426			52.1	22.4	
427+50			171.1	42.8	
429			183.9	46.0	
430+50			188.7	9.9	
432			138.5	7.3	
433+50			59.1	10.4	
434					
434+40			33.3		
435			179.6		
436			18.5		
+25					
463+03			46.7		
+75			162.1		
465			32.4		
467			126.4		
+70			28.9		
468					
+25			22.2		
+50			320.0	35.6	
470+50			65.4	11.5	
471			24.3	8.1	
471+50				20.0	
472	TF 20.0		27.2	11.7	
+50			107.0	45.8	
473+50			113.3	12.6	
474+50			127		
+75			20.0		
475	TF 20		88.9		
476			151.1	37.8	
477			280.0	3.11	100
479			114.4	6.0	
480			32.4		
+50			24.0		
481+40	TF 24.0		21.4		
481+70			395.37	39.41	100

Sheet 17°13.

Sta	Ydge	Earth	d.g.	S.R.	dry Wall
481+70			238.4		
483+50			140.1		
484+75			17.8		
485+10			339.5	10.5	
488+50	TF 350.0		21.4	9.2	
489			142.6		
490			341.7	38.0	
492			483.4		
494			451.9	22.6	100
496			426.0		
497			820.0	82.0	
499+75			356.3	18.7	
501+00			117.1		
+50			56.0		
502			300		
+80	TF 300		42.0	4.7	
503+50			314.8	15.7	
505+50			337.1		
507+50			186.1		
508+50			295.9	29.6	
510			199.2	22.1	
511			46.3	19.9	
+50			40.0	40.0	
512+70			32.0	8.0	
513			577.8	288.9	
515			214.8		100
516			40.8	61.1	
+750			230.0	153.4	25
518			300.9	15.8	
519+50			407.4		
521+50			627.5		
524+30			24.1		
+50			300		
525+20	TF 300		36.1		
525+50			448.2		
527+50			385.2		
529+50			56.0	6.2	
530+20			400		
531	TF 400		62.2		
+40			932.42	84.64	45.0

Sheet 17°14.

Sta	Ydge	Earth	d.g.	S.R.	dryWall	Sheet 17-15
501+40						
	93.1		93.1			
532	TK 10.0		100			
+60	533		533			
533	531.5		478.3	532		
535	509.3		437.9	764		
537	427.8		406.4	214		
539	402.5		362.2	403		
541+10	448.7		426.3	224		
543	474.1		474.1			
545	319.5		319.5			
546+50	46.3		46.3			
547	TK 50.0		50.0			
548+20	50.0		50.0			
+50						
550	388.9		388.9			
552	451.9		451.9			
554	533.4		533.4			
556	533.4		533.4			
556+50	66.7		66.7			
557+30	TK 30.0		30.0			
	16.9		16.9			
557+50	511.6		486.0	25.6		
560	440.3		418.8	22.0		
562	222.2		166.7	55.5		
563	137.5			137.5		
+50	330.6			330.6		
564+50	249.1		99.6	149.5		
565+50	75.5		56.6	18.9	125.0	
566+25	219.5		87.8	131.7		
567+75	64.2		16.1	48.1		
568+30	30.0		30.0		50	
569	55.6		13.9	41.7		
+50	332.4		266.7	66.7		
571	194.5		48.6	145.9		
572	167.6		167.6			
573	25.3		25.3			
+30	TK 50.0		50.0			
574+20	50.0		50.0			
+50	183.3		183.3			
575+60	36.7		26.7			
576						
Total	891.43		7427.3	1387.8	130.0	

Sta	Ydge	Earth	d.g.	S.R.	dryWall	Sheet 17-16
576						
	371.1		371.1			
577+75	50.5		40.4	10.1		
580	192.6		192.6			
581	232		232			
+25	TK 50.0		50.0			
582+20	15.3		7.7	7.6		
+50	34.7		17.3	17.4		
583	129.6		129.6			
584	288.7		144.4	144.3		
586	16.7		16.7			
+50						
586+85	9.7		9.7			
587	49.1		49.1			
588+50	112.0		84.0	28.0		
589+50	301.4		271.3	30.1		
591	350.0		297.5	52.5		
592+50	174.1			174.1		
593+50	105.6		105.6			
594	83.3		83.3			
+50	TK 30.0		30.0			
595+30	23.3		23.3			
+50	183.3		155.8	27.5		
596+50	223.6		223.6			
598	385.2		385.2			
600	457.4		434.5	22.9		
602	164.8		148.3	16.5		
603	88.4		88.4			
+50	201.4		181.3	20.1		
605	50.9		50.9			
+50	TK 60.0		60.0			
606+50	36.1		32.5	3.6		
606+75	331.0		331.0			
608	467.6		467.6			
610+50	13.3		13.3			
+70	TK 150.0		150.0			
612+50	40.7			40.7		
613	113.0			113.0		
+50	272.1		246.7	27.4		
614+50	64.8		64.8			
615						
Total	5716.5		4980.7	935.8		

Sta	ydge	Earth	dq.	S.R.	dryWall	
615				275		
+50	270					
616+50	149.1		74.5	74.6		
618	700.		100.0	100.0		
619+50	177.8			177.8		
621+00	188.9		94.3	94.4		
623	263.0		223.5	223.5		
626	233.4		233.4			
627	111.1		88.1	22.2		
627+50	32.4		24.2	8.1		
628+70	TF 1000		100.0			
629	58.3		58.3			
630	250.0		250.0			
+25	13.9		13.9			
630+80	48.0		48.0			
631+50	215.6		195.3	10.3		
633	207.1		207.1			
635	194.5		194.5			
636+50	105.6		105.6			
637+25	50.0		50.0			
637+35						
644+25	2726.5		2162.1	564.4		Tunnel M ^o 4.
+35	48.9		48.9			
645	349.0		349.0			
647	240.8		216.7	24.1		
649	266.7		266.7			
650	188.9		188.9			
651+50	357.0		357.0			
652+20	75.8		75.8			
653+40	TF 500		50.0			
+50	10.0		10.0			
654+50	229.6		229.6			
656	320.9		320.9			
657	229.8		229.8			
659	422.3		422.3			
660+25	173.6		173.6			
660+50	20.8		20.8			
661+65	TF 400		40.0			
661+75	10.4		10.4			
663	187.5		159.4	28.1		
Total	5958.5		5341.9	616.6		

17°17

Sta	ydge	Earth	dq.	S.R.	dryWall	
663				93		
+20	9.3					
+60						
663+80	15.6		13.2	2.4		
666	415.6		415.6			
668	444.5		444.5			
670	355.6		355.6			
672	296.3		222.2	74.1		
674	326.0		195.6	130.4		
675+50	16.39		12.29	4.10	40.0	
676	68.1		51.1	17.0		
677+90	380.0		247.0	133.0		
679	212.9		106.5	106.4		
679+90	90.0		45.0	45.0	100.0	
681	9.6		9.6			
682+10	234.3		234.3			
682+30	23.3		23.3			
+90	TF 600		60.0			
683+10	11.1		11.1			
684+25	123.5		123.5			
685+00	38.9		38.9			
686+30	15.6		15.6			
+50	233.4		233.4			
688	243.1		243.1			
689+50						
690	42.1		42.1			
690+50	36.1		36.1			
692+50	277.8		277.8			
693	69.5		69.5			
693+40	28.9		26.0	2.9		
693+85						
694	6.9		6.9			
+75	84.7		84.7			
695	16.7		16.7			
695+50						
696	33.3		33.3			
696+70	101.1		96.0	5.1		
697	23.3		22.1	1.2		
698+10	TF 200		TF 200			
698+50	36.3		21.8	14.5		
Total	4547.3		3974.3	573.0	140.0	

17°18

No 19.

STO	Ydgs	E	d.g.	S.R.	dryWall
698+50					
700	222.4		222.4		
+25	1.62		1.38	2.4	
701+50	TE. 50.0		50.0		
701+70	14.8		14.8		
703	215.5		215.5		
705	294.5		294.5		
707	207.4		197.0	10.4	
+50	56.5		56.5		
+80	19.4		19.4		
708+25					
708+50	11.6		11.6		
710	159.7		159.7		
712	216.7		216.7		
712+25	12.0		12.0		
+70					
713	19.4		19.4		
714+10	163.0		163.0		
714+40	25.0		25.0		
714+95	TE. 25.0		25.0		
715+10	11.6		5.8	5.8	
717	213.2		213.2		
+50	98.2		98.2		
717+75	19.4		14.5	4.9	
719+20	TE. 4.00		4.00		
+50	60.0		60.0		
720+50	255.6		230.0	25.6	
721+50	111.1		111.1		
721+90	22.2		22.2		
722+25					
+50	9.3		9.3		
724+00	109.7		109.7		
+50	18.1		18.1		
725+45	TE. 30.0		30.0		
725+70	52.8		52.8		
726+25	116.1		91.3	24.8	
727+25	TE. 40.0		40.0		
+50	13.0		13.0		
728+50	125.9		125.9		
729	69.5		69.5		
Total	3255.2		3181.9	73.9	

No 20

STO	Ydgs	E	d.g.	S.R.	dryWall
729					
+25	27.3		27.3		
730+25	TE. 50.0		50.0		
+50	12.7		12.7		
732+50	246.3		246.3		
734	195.8		195.8		
736	283.4		269.2	14.2	
+60	50.0		42.5	7.5	
737+25	TE. 30.0		30.0		
+50	16.7		11.7	5.0	
739	200.0		180.0	20.0	50.0
740	150.0		60.0	90.0	
741	158.3		47.5	110.8	100.0
742	149.1		44.7	104.4	
743	165.8		41.5	124.3	
744	150.9		45.3	105.6	
745+50	200.0		60.0	140.0	
747	226.1		70.8	165.3	
748+50	208.4		62.5	145.9	
750	208.4		83.4	125.0	
752	296.3		177.9	118.4	
753+50	219.5		197.6	21.9	
754	40.7		36.6	4.1	
755+50	TE. 85.0		85.0		
756	55.6		55.6		
+50	55.6		55.6		
757	45.4		45.4		
+50	96.3		96.3		
758+50	176.9		176.9		
759	37.5		37.5		
759+50	37.5		33.7	3.8	
760+50	167.6		67.0	100.6	
+80	27.8		7.0	20.8	50.0
761+35					
+75	48.2		48.2		
762+50	152.8		61.1	91.7	
764	202.8		152.1	50.7	
+25	13.0		13.0		
764+90	TE. 35.0		35.0		
765+25	26.3		26.3		
Total	4559.0		2914.5	1644.5	200.0

Sta	ydge	E	D.G.	S.R.	dry Mill	
765+25						
766+50	92.8		46.9	28.1		
+65	11.1		11.1			
767+10						
+35	27.8		25.0	2.8		
+65	32.3		30.0	2.3		
+65	TF. 50.0		50.0			
768+50	30.6		27.5	3.1		
769+00	30.74		27.67	30.7		
770	185.2		185.2			
771	163.9		163.9			
772	259.3		259.3			
774	88.5		61.9	26.6		
+65	27.2		19.0	8.2		
775	TF. 250		250			
776	18.5		18.5			
+25	124.3		49.7	74.6		
777	106.0		79.2	26.8		
778+50	250.0		200.0	50.0		
780	41.7		20.9	20.8	10.0	
+50						
781+00						
+25	14.8		7.4	7.4		
782+00	220.4		132.2	88.2		
+50	62.5		46.9	15.6		
784	29.2		26.2	2.9		
+60	35.6		32.0	3.6		
785+50	90.8		90.8			
786	20.8		20.8			
+50	32.4		32.4			
787+25	104.2		104.2			
+50	18.5		18.5			
788+00	TF. 200		200			
+25	20.8		20.8			
790	223.6		223.6		8.0	
+50	67.6		60.8	6.8		
791+25	68.1		68.1			
792+40	TF. 300		300			
792+75	39.9		27.9	12.0		
794+50	379.2		279.2			
796+50	259.3		259.3			
	3521.3		3164.8	416.5	18.0	

17021

Sta	ydge	E	D.G.	S.R.	dry Mill	
796+50						
799	361.1		361.1			
+55	48.9		48.9			
800	TF. 250		250			
+50	33.2		21.6	11.7		
802	191.7		134.2	57.5		
804	355.6		355.6			
+75	126.4		101.1	25.3		
805+50	108.3		97.5	10.8		
806+50	175.9		52.8	123.1		
808	262.5		78.8	183.7		
810	387.1		154.8	232.3		
812	337.1		134.8	202.3		
814	300		210.0	90.0		
815	400		280.0	120.0		
817	400		320.0	80.0		
+150	83.3		66.6	16.7		
818	417		39.4	83		
+50	22.2		13.3	8.9		
819	639		38.3	256		
820	205.6		82.2	123.4		
822	42.97		107.4	322.3		
+75	69.5		41.7	27.8		
823+50	68.8		48.2	20.6		
825	237.5		166.2	71.3		
826+50	200.0		140.0	60.0		
827	333		22.4	99		
827+65	TF. 200		200			
828	38.9		23.3	15.6		
829	194.5		116.7	77.8		
831	333.4		216.7	116.7		
833	300.0		210.0	90.0		
835	250.0		100.0	150.0		
837	216.7		65.0	151.7		
839	229.6		137.8	91.8		
841	230.4		161.3	69.1		
843	231.5		162.0	69.5		
845	229.6		160.3	68.9		
846+50	150.0		120.0	30.0		
847	83.3		75.0	8.3		
79101	747.63		470.54	277.09		

17022

Sta	Ydge	D.G.	* Earth	S.R.	dryWall	Sheet No 23
847						
847+27	81.0	2.10		6.07		
	1.47	2.7		1.10		
847+35	95.7	2.40		7.17		
850+40						
850+50	32.4	32.4				
851+75	469.9	32.89		14.10		
852+50	38.9	38.9				
853+10						
+50	59.3	17.8		41.5		
854	280.6	22.45		56.1		
+50	19.4	19.4				
855+50	TE. 20.0	20.0				
855+75	76.4	76.4				
857	90.3		67.7	22.6		
+70	101.8		76.3	25.5		
858	31.1		31.1			
862+50	TE. 35.00		35.00		9.0	
863	51.9		36.3	15.6		
+50	72.2		50.5	21.7		
864	70.4		42.2	28.2		
866	296.3		148.2	148.1		
867+50	180.6		135.4	45.2		
869	208.4		83.4	125.0		
870+50	200.0		50.0	150.0		
871+50	107.4		43.0	64.4		
873	111.1		77.8	33.3		
874+50	108.3		97.5	10.8		
876+50	179.6		143.7	35.9		
878+00	209.7		167.8	41.9		
879+50	250.0		150.0	100.0		
880+50	186.1		46.5	139.6		
889	54.3		13.6	40.6		
882+50	TE. 60.0		60.0			
883	45.4		26.2	9.1		
884	173.0		87.5	87.5		
+50	42.1		10.5	31.6		
885						
+50	26.1		14.4	21.7		
886+50	150.0		112.5	37.5		
889	314.8		220.4	94.4		
	477.84	78.8	2582.6	1640.3	9.0	
	467.97	78.8	2582.6	1640.3	9.0	

No 5

Sta	Ydge	D.G.	* Earth	S.R.	dryWall	Sheet No 24
889						
890	81.5		73.3	8.2		
892	177.8		63.2	113.6		
894+50	289.4		217.0	72.4		
+90	24.1		21.9	2.4		
900+50	TE. 125.0		125.0		10.0	
901	38.9		38.9			
+50	77.8		70.0	7.8		
901+75	19.5		17.5	2.0		
902+70	TE. 15.0		15.0			
903	13.3		12.0	1.3		
904	88.9		88.9			
905+50	156.9		141.2	15.7		
907+50	268.5		211.6	26.9		
+85	25.9		18.1	7.8		
908+25	TE. 10.0		10.0			
908+50	210.7		147.5	63.2		
910	243.1		170.2	72.9		
910+50	38.9		27.2	11.7		
911+25	TE. 15.0		15.0			
911+50	16.7		15.0	1.7		
913+50	222.7		200.0	22.7		
915+50	233.4		210.1	23.3		
916	68.5		17.1	51.4		
+30	19.4		13.6	5.8		
917	TE. 20.0		20.0			
+50	27.8		16.7	11.1		
919+50	244.5		207.8	36.7		
920+25	72.2		65.0	7.2		
920+75	38.9		31.1	7.8		
921	12.7		10.8	1.9		
923	111.1		100.0	11.1		
925	209.3		188.4	20.9		
927	177.8		106.7	71.1		
929	200.0		120.0	80.0		
931	231.5		162.0	69.5		
+75	45.1		36.1	9.0		
933+50	TE. 50.0		50.0			
934	33.3		33.3			
936	244.8		222.3	22.5		
Total	4199.1		3348.3	850.8	10.0	

STO	Ydge	E	D.G.	S.R.	adobe	dryWall	N ^o 25
936							
938	1926	1723		193			
940	2074	1970		194			
942	2000	1800		200			
943	3556	2278		198			
+75	1278	1150		128			
944+150	278	278					
+85	389	350		39			
945+25	1422	355		1067			
948+30	12923	11014		1909			
+41	204	102		102			
949	2316			579	1737		
950	2908				2908		
952	2222				2222		
954+50	2176				2176		
958	2982				2982		
962	2593				2593		
965	1583				1583		
969+50	2375				2375		
972	1945				1945		
975	2286				2286		
977	1982			496	1486		
978	1120			448	672		
+30	156			62	94		
996	TE 7500		7500				
+50	421		400	21			
998	3820		2674	1146			
1000	5000		3500	1500			
1002	2963		2370	593			
1004+50	3959		2771	1188			
1006+50	3834		2300	1534			
1008+50	3556		2124	1422			
1010	1167		1050	117			
1010+40	311		280	31			
1011+40	TE 250		250				
1012	289		289				
1013+50	1695		1695				
1015+50	2074		2074				
1017	1361		1293	68			
1019+50	3380		2380				
T0101	8135.1	11116	33960	1121.6	2505.9		

N^o6

STO	Ydge	E	D.G.	S.R.			N ^o 26
1019+50							
1021+50	2963		2667	296			
1023	1750		1750				
+50	583		408	175			
+80	194		136	58			
1025	TE 200		200				
+50	324		324				
1027	2917		2917				
+50	829		829				
1028+40	325		325				
1035	TE 2500		2500				
1035+50	1000		1000				
1036+50	7167		7167				
1038	1306		1306				
1038+80	385		385				
1039+25	104		104				
1039+50	1403		1263	140			
1041	1864		1678	186			
1042+25	347		347				
1042+60	TE 4500		4500				
1049	389		389				
+50	713		713				
1050	194		194				
+30	TE 500		500				
1052+50	181		127	54			
1053	2019		2019				
1054	389		389				
1054+60	TE 200		200				
1055+50	389		350	39			
1056	3334		3001	333			
1058+50	472		472				
1059+35	TE 150		150				
1060	259		259				
1060+50	2074		2074				
1062+50	1213		1213				
1063+50	729		656	73			
1064+35	2819		2678	141			
1065+50	2593		2593				
1068	1815		1815				
1070							
T0113	51093		49598	1495			

17027

17028

Sto	Ydgs	E	DE	SR
1070	428		38.5	43
1071+10	2250		2250	
1072+70	31.1		31.1	
1078	1269		1269	
+50	2639		2639	
1080+50	1037		1037	
1082+50	1222		1222	
1084	1278		1278	
+50	3778		3778	
1086	852		852	
1087	167		167	
+50	TE 350		350	
1088	162		162	
+25	3209		3209	
1090+50	1945		1945	
1092	5037		5037	
1094	2695		2695	
1095	1625		1625	
1096+50	1139		1139	
1097	1700		1700	
1097+90	TE 250		250	
1099	241		241	
+50	796		796	
1100	778		778	
+70	156		156	
1101+20	907		907	
1101+50	1556		1556	
1102+50	194		194	
1104+50				
1105	TE 400		400	
1106+80	52		52	
1107	370		296	74
+50	722		722	
1108+50	1370		1270	
1110+50	2000		2000	
1112+50	1823		1823	
1114+50	1685		1685	
1116+50	1053		1053	
1117+75	1854		1854	
1118+50				
Totals	49310		49193	117

Sto	Ydgs	E	DE	SR
1118+50	2472		2472	
1119+50	722		722	
1120+50	397		397	
1121+60				
1122	194		194	
+50	583		583	
1123	1750		1750	
1124+50	194		194	
1125	278		278	
+50	2797		2797	
1127+50	3695		3695	
1130+50	156		156	
+90	TE 600		600	
1134+50	111		111	
+75	972		923	49
1136	1389		1389	
1138	1389		1389	
1140	1111		1111	
1142	222		222	
1143	556		556	
1144+25	556		556	
1145+50	3111		3111	
1146+90	10695		10695	
1148	1125		1125	
1148+15	3507.5		3502.6	49
1167+00	819		819	
1167+10	14168		14168	
1168	10890		10890	
1169	9334		9334	
1171	3334		3334	
1173	1185		1185	
1175	1296		1296	
1177	1500		1500	
1179	1611		1611	
1181	482		482	
1181+50	389		389	
1182+25	TE 1250		1250	
1187	222		222	
+50	1407		1407	
1189+50	82963		82943	49
	27777		27777	

1707

11°29'					11°30'				
Sta	Ydge	E	D.G.	S.R.	Sta	Ydge	E	D.G.	S.R.
1184+50					1246				
	1037		1037			648		648	
1191+50					1247+25				
	1185		1185			TE 100		100	
1193+50					1248+50				
	1778		1778			194		194	
1195+50					1249				
	1556		1556			1556		1556	
1197+50					1251				
	1323		1323			1556		1556	
1199+50					1253				
	2000		2000			194		194	
1201+50					+50				
	3056		3056			TE 200		200	
1203+50					1255				
	2722		2722			65		65	
1205+50					+50				
	1556		1556			833		833	
1207+50					1258				
	2496		2496			907		907	
1209+25					1259				
	882		882			1815		1815	
1210+10					1261				
	1250		1250			1417		1417	
1212+25					1262+50				
	83		83			444		444	
+50					1263+30				
	889		889			363		363	
1215					1264				
	1296		1296			1593		1593	
1217					1266				
	1250		1250			1945		1945	
1218+50					1268				
	222		222			2384		2384	
1219					1270+50				
	TE 2500		2500			2963		2963	
1226+25					1272+50				
	512		461	51		356		356	
1226+75					1272+80				
	1330		1197	133		TE 250		250	
1227+40					1274				
	TE 200		200			241		241	
1228+40					+50				
	133		133			1830		1830	9.6
1229					1276+50				
	917		917			1556		1556	
1230+50					1278				
	2852		2709	143		1833		1833	
1231+50					1280				
	3202		3042	160		1009		1009	
1232+80					1281				
						2019		2019	
1233+20					1283				
	500		500			1083		1083	
+70					1284+50				
	452		1452			361		361	
1234+50					1285+50				
	222		222			TE 100		100	
1235					1286+50				
	TE 100		100			167		167	
+40					1287				
	117		117			1333		1333	
+75					1289				
	1500		1425	75		1389		1389	
1238					1291				
	992		992			181		181	
+75					+50				
	1000		1000			194		194	
1239+50					1292				
	167		167			1389		1389	
1240					1294				
	130		130			792		792	
1240+50					1295+50				
	777		778			111		111	
1242					1296				
	963		963						
1244					1297+25				
	1482		1482			625		625	
1246					1298				
Totals	45641		45079	562	Totals	36092		35996	9.6

Sta	Ydgs	E	D.G.	S.R.		17°31'
1298						
1299+50	358.4		340.5	17.9		
1300+50	327.1		168.5	168.6		
1302	501.4		401.1	100.3		
1303	204.6		204.6			
1304	74.1		74.1			
1306	111.1		111.1			
1308	163.0		163.0			
1309+50	130.6		130.6			
1311+50	113.0		113.0			
1313+50	168.5		168.5			
1315+50	168.5		168.5			
1316+50	69.5		69.5			
1317	25.9		25.9			
1320+50	TE 150.0		150.0			
1321	24.0		24.0			
1323	168.5		168.5			
1325	144.5		144.5			
1327	168.5		160.1	8.4		
1328+50	156.4		75.8	50.6		
1329+25	27.1		16.3	10.8		
1330	29.2		29.2			
1332	100.0		100.0			
1334	44.4		44.4			
1336	22.2		22.2			
1337	24.1		24.1			
1339	100.0		100.0			
1340+25	97.2		97.2			
1341+75	194.5		194.5			
1342+30	42.8		38.5	4.3		
1349+50	TE 350.0		350.0			
1350	32.4		32.4			
1351+50	252.8		151.7	101.1		
1352+50	155.6		140.0	15.6		
+90	20.7		20.7			
1354+20	TE 40.0		40.0			
1354+50	19.4		19.4			
1355	98.7		98.7			
+50	58.2		58.2			
+75	00		00			
	4909.0		4431.4	477.6		

Sta	Ydgs	E	D.G.	S.R.	dry W.	17°32'
1355+75						
1356	15.0		15.0			
1358+50	301.0		301.0			
1360+25	710.8.3		108.3			
1361	158.3		150.4	7.9	20.0	
+75	136.8		136.8			
1362+50	49.3		37.0	12.3		
1363+50	80.6		20.2	60.4		
1365+50	132.4		92.7	39.7		
1367	275.9		248.3	27.6		
+50	266.7		266.7			
1368+10	12.50		12.50			
1374+70	8.33		7.50	8.3		
1375	TE 350.0		350.0			
1377	14.4		14.4			
1379	288.9		288.9			
1380	227.8		205.0	22.8		
1382	100.9		100.9			
1384	240.8		240.8			
1385	200.0		200.0			
1386	105.6		105.6			
1387	61.1		61.1			
+25	TE 250		250			
1388	51.2		51.2			
1389	182.7		155.3	27.4		
1390	90.7		60.5	27.2		
1391	20.7		14.5	6.2		
1392+75	TE 40.0		40.0			
1395	39.1		33.2	5.9		
1397	45.1		29.3	15.8		
1399+50	TE 750		750		100	
1400	51.9		46.7	5.2		
+75	238.9		215.0	23.9		
1402	110.4		66.2	44.2		
+50	238.2		226.3	11.9		
1404	41.7		41.7			
+35	13.6		13.6			
1407	TE 250		250			
+50	18.1		18.1			
1409	27.5		27.5			
+65	25.3		25.3			
	4692.2		4545.5	146.7	30.0	

Sta	Ydgs	E	D.G.	S.R.	dryfall	17033
1402+65						
1403+80	TF. 200		200			
	222		222			
1404	389		389			
1+50	117		117			
+85	163		147	16		
1405+05	2107		2107			
+50	144		144			
1408	311		311			
+30	2093		2093			
1409	1871		1871			
1411	167		167			
1413						
+50						
1414+80						
1415	289		275	14		
1417	2074		1970	104		
1419	2222		2111	111		
1420+50	1796		1437	359		
1421+50	1093		874	219		
1422+50	1093		1032	55	50	
1423+50	1130		1017	113		
1424+75	1204		1084	120		
1426+50	1977		1779	198		
1427+60	713		642	71	200 @ 200 ft / yd.	
1428	222		222			
1430	2315		2315			
1431+50	2167		1734	433		
1433	2167		1842	325		
1434	1046		941	105		
1435+50	1333		1067	266		
1436+50	1000		600	400		
1437+50	556		528	28		
1438+50	509		483	26		
1439	458		425	23		
1440+50	1656		1656			
1441	866		866			
1442	1070		1070			
1443	1593		1593			
+50	630		630			
1455+75	TF 800		7500	500		
	47263		43777	3486	250	

Sta	Ydgs	E	D.G.	S.R.	dryfall	17034
1455+75						
1456	90		54	36		
1457+50	181		163	18		
1458+50	648		648			
1460+50	2019		1918	101		
1461+50	1514		1514			
1462+75	1678		1678			
1463+10	243		243			
1463+60	TF. 100		100			
1464	167		167			
1466	1871		1777	94		
1467+50	136		129	7		
1468+50	389		389			
1469	130		130			
1471	1296		1296			
1473	1556		1556			
1474	1426		1426			
+50	1639		1630			
1475+50	2611		2350	261		
1476+50	945		898	47		
1477+25	1479		1479			
1477+95	3825		3442	383		
1478+16	1202		962	240		
1478+25	260		260			
1480+90	25396		24209	1187		1108
1481	289		289			
+50	2278		2278			
1482	1111		1111			
1484	2185		2185			
1485+50	1625		1625			
1487+50	2167		2059	108		
1488+50	648		648			
1489+50	815		815			
1491+50	945		945			
1492+50	1037		1037			
1494	1167		1167			
+50	65		65			
1496+50	TF 400		400			
1497	259		259			
1499	1815		1815			
	47262		40907	1295		

Sta	Ydgs	E	D.G.	S.R.	dryWall		N ^o 37
1574+50							
1575+50	1167		904	223			
1576+50	1056		898	158			
1577	222		189	33			
1579	TE 1000		1000		200		
1579+50	407		387	20			
1581	2472		185.4	618			
1583	2963		74.1	2222			
1584	1167		81.7	350			
1585	963		86.7	9.6			
1587	1778		160.0	178			
+35	156		14.0	16			
1588	TE 250		250				
+50	333		31.6	17			
1590	922		65.0	72			
1591	1389		76.4	625			
1592	1056		84.5	211			
1594	1853		175.9	93			
+85	129.1		129.1				
1595+50	89.1		89.1				
1596+75	1389		132.0	69			
1597+30	428		38.5	43			
1598+60	TE 75.0		75.0				
1599	31.1		29.5	1.6			
1601+25	2222		200.0	222			
1601+50	1944		155.5	38.9			
1602+50	1333		170.0	133			
1604	2129		192.5	214			
1605+50	1736		121.5	52.1			
1606+25	611		55.0	6.1			
1607	533		48.1	54			
1608	1074		96.7	107			
1609	1333		120.0	133			
+30	200		180	20			
1610+65	TE 75.0		75.0				
1611	486		48.6				
1612	199.1		199.1				
1614	231.5		219.9	11.6			
1615	1065		958	107			
1617	1065		1065				
44812			3766.5	7147	200		

Sta	Ydgs	E	D.G.	S.R.	dryWall		N ^o 38
1617							
+75	958		958				
1618	18.1		163	1.8			
+85	TE 40.0		40.0				
1619	138		138				
1620	1472		132.5	147			
1622	1823		155.8	27.5			
1624	1823		165.0	183			
1625+25	173.6		138.9	34.7			
1625+40	125		125				
1625+70						200	
1626	19.9		159	4.0			
1628	2667		240.0	267			
+50	1823		1823			100	
16	278		278				
1629	TE 400		400				
1630	454		40.9	4.5			
+50	150.9		150.9				
1631+50	1324		1324				
1632+50	28.9		28.9				
+90	TE 350		350				
1633+80	27.9		222	57			
1634+25	1118		88.3	225			
1635	625		562	63			
+50	29.1		25.2	3.9			
1636+15	TE 100		100				
+50	25.9		25.9				
1637	875		787	88			
+75	16.2		14.6	1.6			
1639	205.6		185.0	20.6			
1640+50	225.0		202.5	22.5			
1642	1167		105.0	117			
+75	84.3		84.3				
1643+25	227		227				
1643+50	TE 200		200				
1644+10	40.0		36.0	4.0			
+50	155.6		140.0	15.6			
1645+50	220.4		182.5	37.9			
1646+50	48.6		43.7	4.9			
1647+25	13.9		12.5	1.4		150	
1647+50	3341.6		3045.8	295.8	450		

Sto	ydge	E	D.B.	S.R.	dry wall	17039
1647+50						
1648	1042		93.8	104		
1649+50	3750		337.5	375		
1650+50	162.1		162.1			
1651	1139		91.1	228		
1652	1889		188.9			
+50	99.1		89.2	99		
1653+50	311.1		280.0	31.1		
1654	69.5		62.5	7.0		
+90	TE 40.0		40.0			
1655+50	46.7		42.0	4.7		
1656+10	46.7		46.7			
1657+40	TE 50.0		50.0			
1657+50	10.4		9.4	1.0		
1659	2139		192.5	214		
+50	71.3		64.2	7.1		
1659+80	13.6		9.4	6.2		
1661	TE 60.0		60.0		1.50	
+50	32.4		29.2	3.2		
1663	2139		213.9			
1664	142.6		128.3	14.3		
+50	58.3		52.5	5.8		
1664+75	130		130		5.0	
1665	127.3		127.3			
+50	67.6		60.8	6.8		
1668	41.7		37.5	4.2		
1669+50	198.6		198.6			
1670+75	135.4		135.4			
1671	15.1		15.1		5.0	
1671+50	38.9		38.9			
1673	225.0		191.2	33.8		
+50	78.2		70.4	7.8		
1674+25	7.7		6.9	7.7		
1675+50	62.1		53.0	9.1		
1677	158.3		142.5	15.8		
1678	155.6		132.3	23.3		
+40	31.1		31.1			
1679	TE 100		100			
+50	32.4		27.5	4.9		
1681	233.4		233.4			
Total	8126.4		3980.6	2958	2.50	

Sto	ydge	E	D.B.	S.R.	C.G.	Acce	17040
1681							
1682	1130		79.1	239			
+75	38.6		34.2	4.4			
1683+25	75.0		62.5	12.5			
1684	116.7		116.7				
1685	142.6		142.6				
1686	139.8		139.8				
1688	124.1		124.1				
1689	64.8		64.8				
1690+50	84.7		84.7				
1692+50	124.1		124.1				
1694	155.6	124.5				31.1	
1695	98.2	88.4				9.8	
1696+50	113.9					113.9	
1698	194.5					194.5	
+75	77.8					77.8	
1699	6.5					6.5	
1704+40	120.0	60.0				60.0	
1705	36.1	18.1				18.0	
1707	177.8	88.9				88.9	
1709	163.0	81.5				81.5	
1710	131.5	98.6				32.9	
1711+50	194.5	175.0				19.5	
1713	194.5	175.0				19.5	
1715	259.3					25.9	233.4
1716+50	233.4					23.3	210.1
1718	244.5					24.5	220.0
1720	300.0					30.0	270.0
1722	311.1					31.1	280.0
1723+50	233.4					23.3	210.1
1724+50	129.6					12.9	116.7
1725	25.9					2.5	23.4
1728+75	TE 150.0					150.0	
1729	9.7					9.7	
+50	151.9					151.9	
1730+50	129.6					12.9	116.7
1731	64.8					64.8	
+30	19.4					19.4	
1734+30	TE 100.0					100.0	
1735	25.9					2.5	23.4
Total	4975.2	910.0	977.6	45.2	912.0	2130.4	

Sta	ydge	E	D.G.	S.R.	C.G.	Adobe	Brick Masonry	Concrete
1735	58.3					58.3		
+50	129.6					129.6		
1736+50	181.5					181.5		
1738+50	207.4					207.4		
1740+50	103.7					103.7		
1741	168.5					168.5		
1742	38.9					38.9		
1743	118.5	59.3			59.3			
1744	435.2				130.6	304.6		
1745	306.5				229.9	76.6		
+50	418.6				418.6			
1746+50	61.1				61.1			
1747							4.0	1.7
	222.8	59.3			89.4	136.9	4.0	1.7
		✓			✓	✓	✓	✓

Sheet 172	Station	Cu. yds.	Disintegrated Granite.	Solid Rock.	Cemented Gravel.	Adobe.	Earth	Dry Wall	Rubble Masonry.	Concrete.	Back Fill.
	0										
1	1044+50	7322.1	5346.9	1078.8	610.3		286.1	10.6			
2	1081+75	13186.9	10966.9	2015.5			204.5				
3	107+50	3588.8	3202.8	132.8			253.2				
4	156+90	4257.8	3806.7	451.1				30.0			100.
5	180+00	6104.1	5812.0	292.1				8.0			
6	205+40	5311.2	5135.7	175.5				75.0			60
7	230+25	4779.9	4371.7	408.2				20.0			
8	252+75	4741.7	4594.9	146.8				10.0			
9	278+40	3154.7	2929.7	225.0				92.0			
10	311+25	5338.7	5007.6	331.1				10.0			
11	357+30	8096.2	7547.0	549.2				40.0			
12	419+00	7849.8	7392.0	457.8				27.0			
13	481+70	4347.8	3953.7	394.1				10.0			
14	531+40	9324.2	8477.8	846.4				45.0			
15	576+00	8814.7	7427.3	1387.4				130.0			
16	615	5716.5	4980.7	735.8							
17	663+00	5958.5	5341.9	616.6							
18	698+50	4547.3	3974.3	573.0				140.0			
19	729+00	3255.8	3181.9	73.9							
20	765+25	4559.0	2914.5	1644.5				200.0			
21	796+50	3581.3	3164.8	416.5				18.0			
22	847+00	7476.3	4705.4	2770.9							
23	889+00	4775.4	782.3	1640.5			2352.6	9.0			
24	936+00	4199.1		850.8			3348.3				
25	1019+50	8135.1	3396.0	1121.6	2505.9		1111.6				plastered 10.0
26	1070	5109.3	4959.8	149.5							
27	1118+50	4931.0	4919.3	11.7							
28	1181+50	8296.2	8291.3	4.9							
29	1246	4564.1	4507.9	56.2							
30	1298	3609.2	3599.6	9.6							
31	1355+75	4909.0	4431.4	477.6							
32	1402+65	4692.2	4345.5	346.7				30.0			
33	1455+75	4726.3	4377.7	348.6				5.0			200 @ 200 per yd.
34	1499	4220.2	4090.7	129.5							
35	1540+50	4233.8	3869.2	364.6				55.0			
36	1574+50	3932.1	3254.0	678.1				160.0			
37	1617	4481.2	3766.5	714.7				20.0			
38	1647+50	3341.6	3045.8	295.8				45.0			
39	1681+00	4126.4	3830.6	295.8				25.0			
40	1735	4975.2	977.6	45.2	912.0	2130.4	910.0				
41	1747+00	2227.8			899.4	1269.1	59.3				
		220,798.5	1,80,681.4	2326.44	2421.7	5905.4	8525.6	1214.6	34.0	1.7	160.0

Ed Fletcher Papers

1870-1955

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**Business Records - Water Companies - Cuyamaca
Water Company - Flume line: traverse notes on El
Monte to Lankershim Tunnels and excavation notes**



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