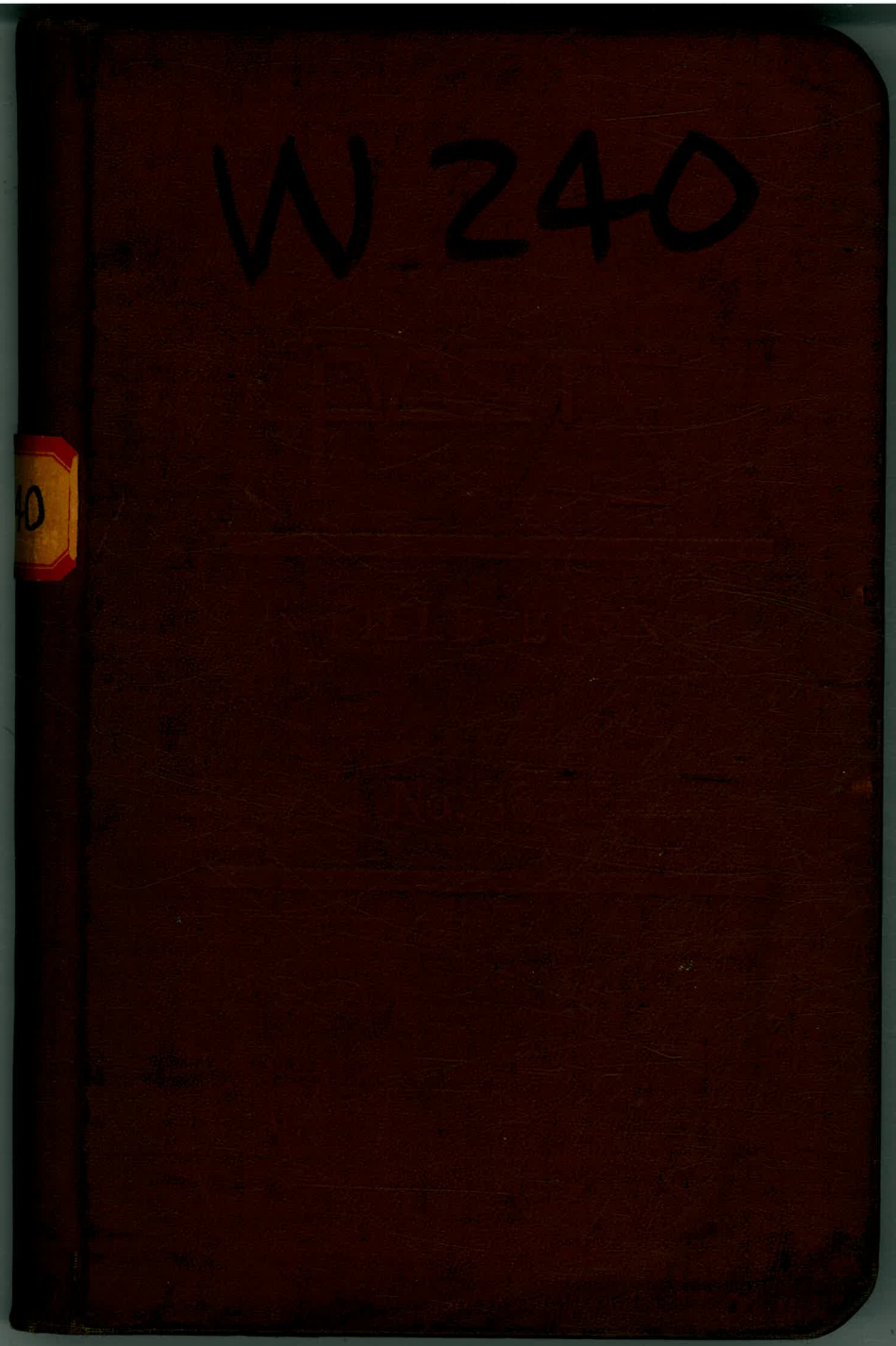

W 240
0

FB # 240

Our Leather Bound Engineers Note Books are carried in the following rulings:

No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.

No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.

No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.

No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

We also carry the Note Books listed above, bound in extra strong Fabri-Hide (otherwise the same quality of book), which can be furnished at a somewhat lower price.

In ordering Fabri-Hide covered books, add the letter *"F"* to catalog number.

THE FREDERICK POST CO.

ENGINEERING and DRAFTING SUPPLIES

IRVING PARK STATION

CHICAGO, ILL.

Index.

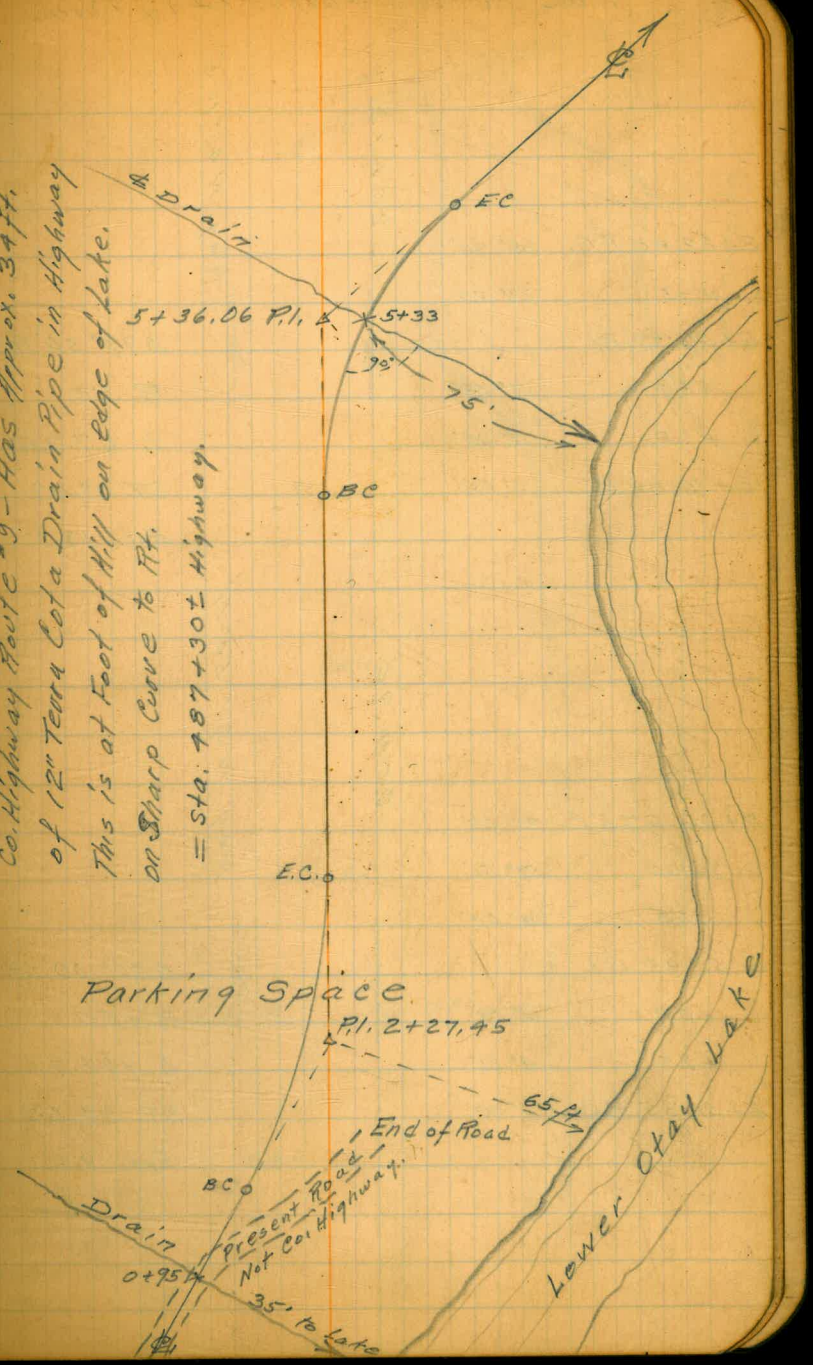
(2) Road Survey — Upper Otay Dam,

5+87.29 E.C.	34° 09'	136.11	Mag. N 8° 10' E
+75	30° 29'		
+50	23° 19'		
5+36.06 P.I.			Δ 68° 00' Rt.
+25	16° 09'		R 100
5+00	9° 00'		L 118.68
+75	1° 50'		S.T. 67.45
4+68.61 B.C.	0° 00'		Ext. 20.6
3+07.57 E.C.	36° 30'	339.48	Mag. N 59° 50' W
3+00	35° 03'		
+75	30° 17		
+50	25° 30'		
+25	20° 44'		
2+27.45 P.I.		227.45	Δ 73° 00' Lt.
2+00	15° 57'		R 150
+75	11° 11'		L 191.11
+50	6° 24'		S.T. 110.99
+25	1° 38'		Ext. 36.6
1+16.46 B.C.	0° 00'		Mag. N 13° 10' E
0+00 P.I. = Beg. Line = 791+75 Co. Highway Sta. & Present Road			

(See Note on Opposite Page for Highway Station Ing)

Dec. 9 - '27
Ward - Chf.
Duermit - Chm.
McBain -

Note: — 445 ft. ± Back of 0+00 Co. Highway Route 9 - Has Approx. 34 ft. of 12" Terra Cota Drain Pipe in Highway This is at Foot of Hill on Edge of Lake. On Sharp Curve to Rt. = Sta. 787+30 ± Highway.



③ Road Survey — Upper Otay Dam.

206.12

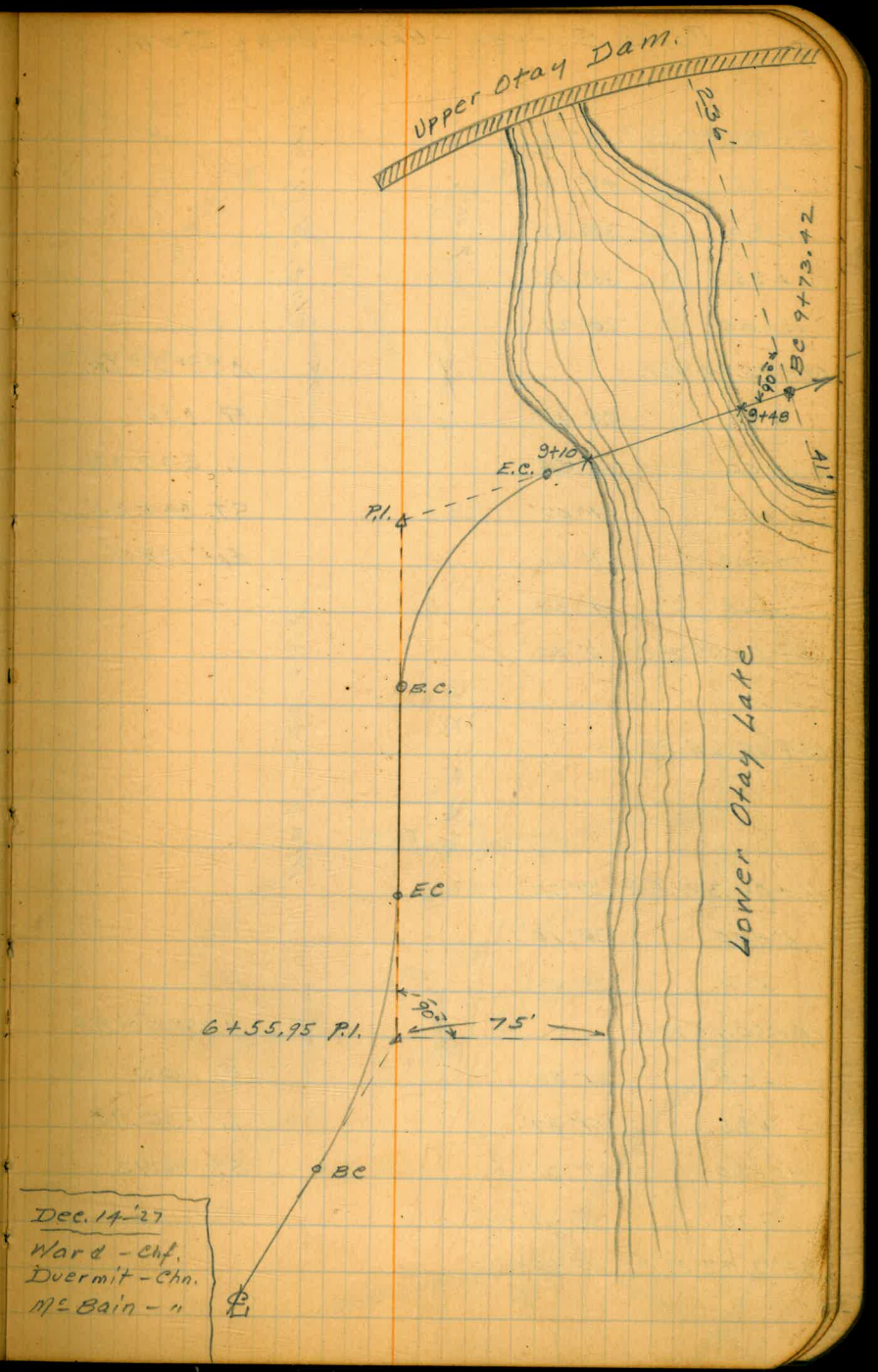
Mag. N 45° 10' E

8+83.80 E.C.	38° 30'	
+75	33° 28'	
8+56.37 P.I.		Δ 77° 00' Rt.
+50	19° 08'	R 50
+25	4° 49'	L 67.20
8+16.60 B.C.	0° 00'	S.T. 39.77
		Ext. 13.9

204.90

Mag. N 31° 50' W

7+06.07 E.C.	20° 00'	
7+00	18° 51'	
+75	14° 04'	
6+55.95 P.I.		Δ 40° 00' Lt.
+50	9° 18'	R 150
+25	4° 31'	L 104.72
6+01.35 B.C.	0° 00'	S.T. 54.60
		Ext. 9.6



Dec. 14-'27
Ward - Chf.
Duermit - Chn.
McBain - "

④ Road Survey - Upper Otay Dam.

15+81.47 E.C. 44° 00'
+75 42° 46'
+50 38° 00'
+25 33° 13'
15+00 28° 27'
14+95.94 P.I.
+75 23° 40'
+50 18° 54'
+25 14° 07'
14+00 9° 21'
+75 4° 34'
13+51.09 B.C. 0° 00'

269.43

Mag. N 32° 20' E

Δ 88° 00' Lt.
R 150
L 230.38
S.T. 144.85
Ext. 58.5

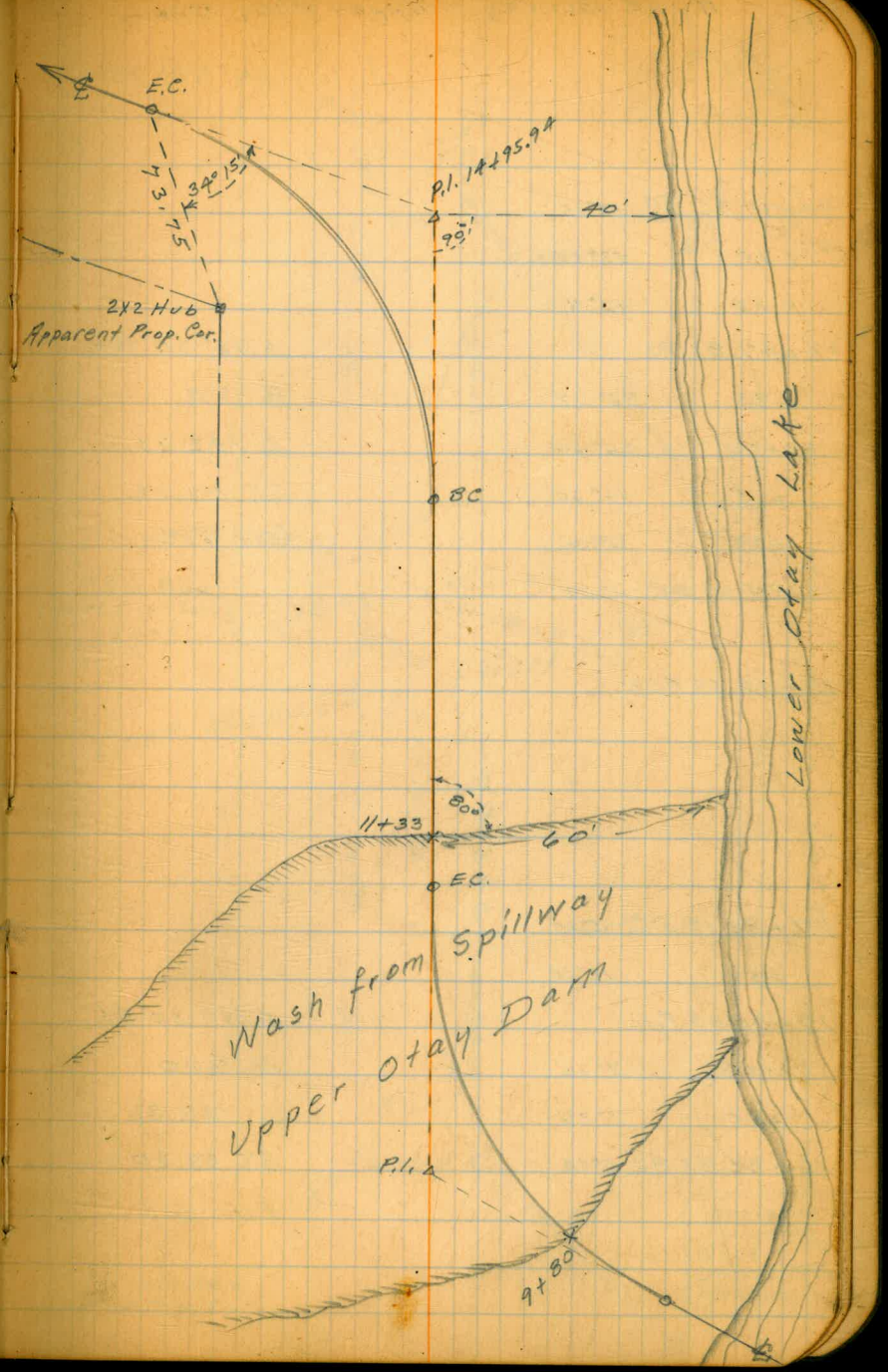
13+30.65 P.O.T.

168.35

Mag. S 60° 00' E

11+04.32 E.C. 37° 30'
11+00 36° 16'
+75 29° 06'
10+50.15 P.I.
+50 21° 56'
+25 14° 47'
10+00 7° 37'
+75 0° 27'
9+73.42 B.C. 0° 00'

Δ 75° 00' Rt.
R 100
L 130.90
S.T. 76.73
Ext. 26.0



Road Survey — Upper Otay Dam.

Mag. South

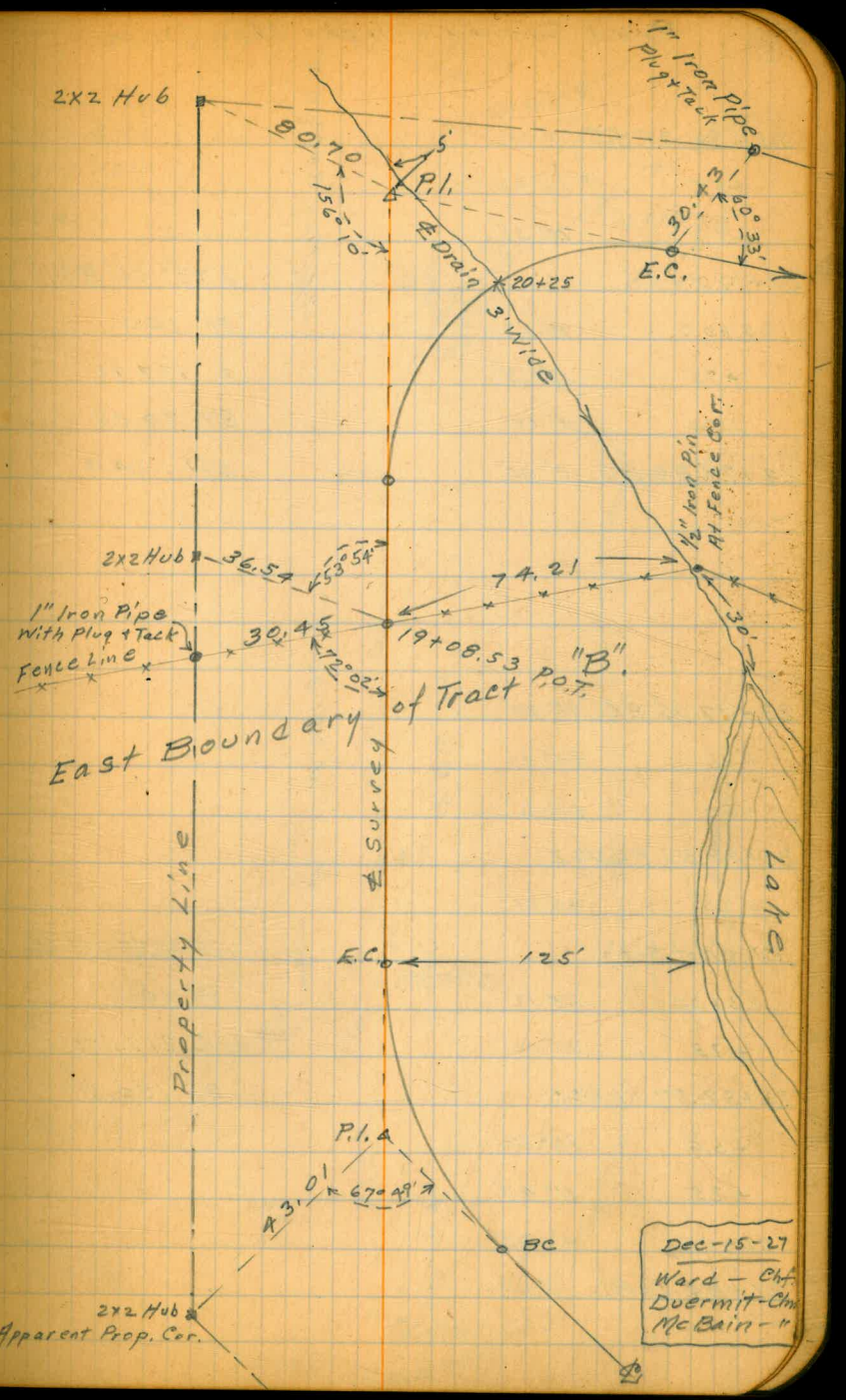
20+77.02 E.C.	58°15'	
+75	57°25'	
+50	47°11'	
20+47.81 P.I.		Δ 116°30' Rt.
+25	36°57'	R 70
20+00	26°44'	L 142.33
+75	16°30'	S.T. 113.12
+50	6°16'	Ext. 63 ±
19+34.69 B.C.	0°00'	

19+08.53 P.O.T.

345.84

Mag. N 63°10' E

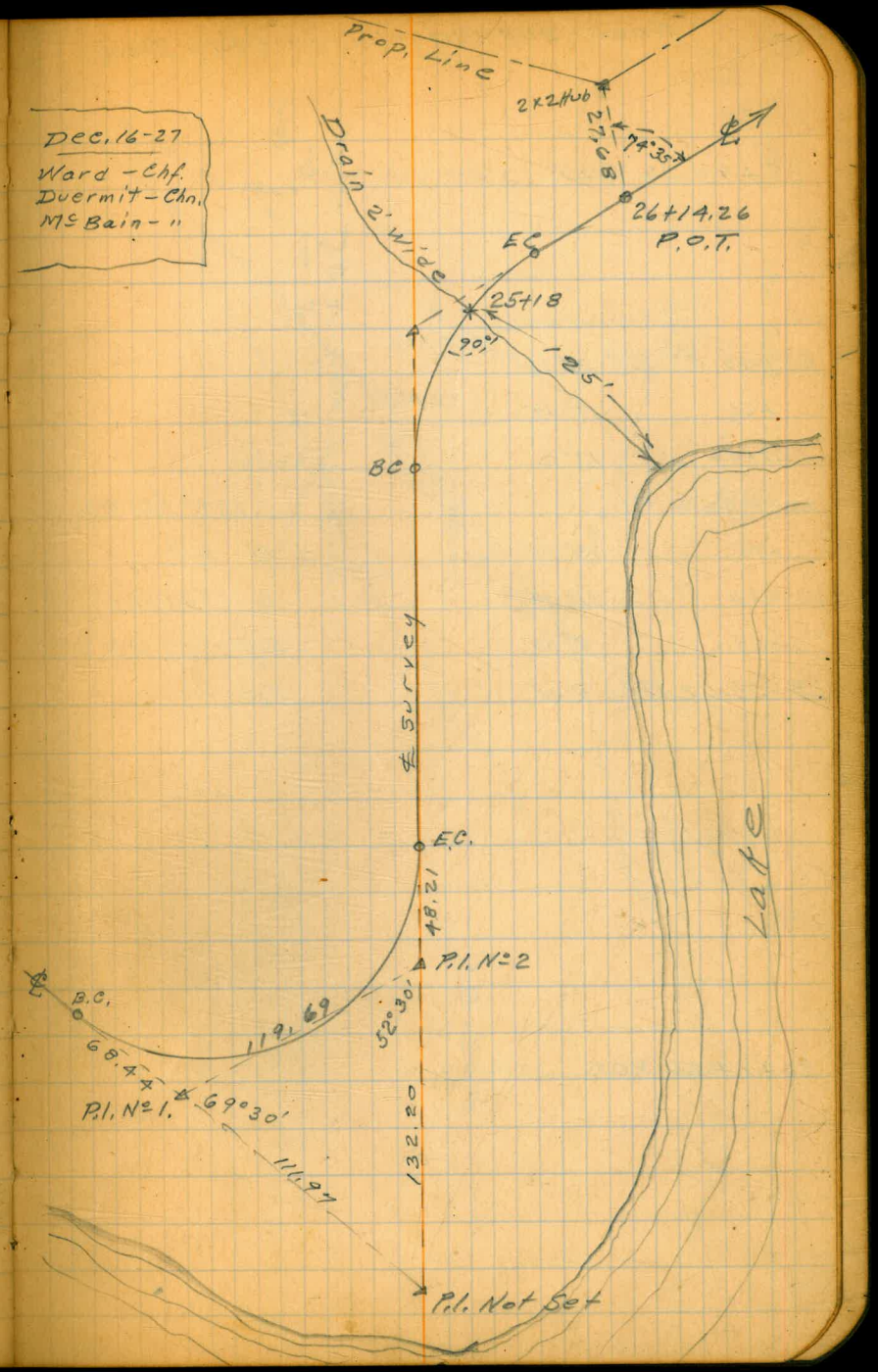
17+85.17 E.C.	15°30'	
+50	12°08'	
17+06.05 P.I.		Δ 31°00' Rt.
17+00	7°22'	R 300
+50	2°36'	L 162.32
16+22.85 B.C.	0°00'	S.T. 83.20
		Ext. 11.3



(6) Road Survey — Upper Otay Dam.

25+56.25 E.C.	36°30'		
+50	34°43'		
+25	27°33'		
25+02.84 P.I.		Maj. S49°15'E	Δ 73°00' Rt.
25+00	20°23'		R 100
+75	13°13'		L 127.41
+50	6°04'		S.T. 74.00
24+28.84 B.C.	0°00'		Ext. 24.4
		286.19	
23+97.06 E.C.	61°00'		
+75	54°41'		
+50	47°31'		
23+48.85 P.I. N°2		Maj. N58°00'E	
+25	40°21'		
P.I. (Not Set)			Δ 122°00' Lt.
23+00	33°12'		R 100
+75	26°02'		L 212.93
22+52.57 P.I. N°1.			S.T. 180.41
+50	18°52'		
+25	11°43'		
22+00	4°33'		
21+84.13 B.C.	0°00'	400.64	

Dec. 16-27
Ward — Chf.
Duermit — Chn.
McBain — "



(7) Road Survey – Upper Otay Dam.

29+96.36 P.O.T.

Mag. N 85° 15' W

5 chains

29+45.87 E.C. 67° 15'

+25 57° 17'

29+00 45° 21'

29+48.10 P.I. Δ 134° 30' Rt.

+75 33° 25' R 60

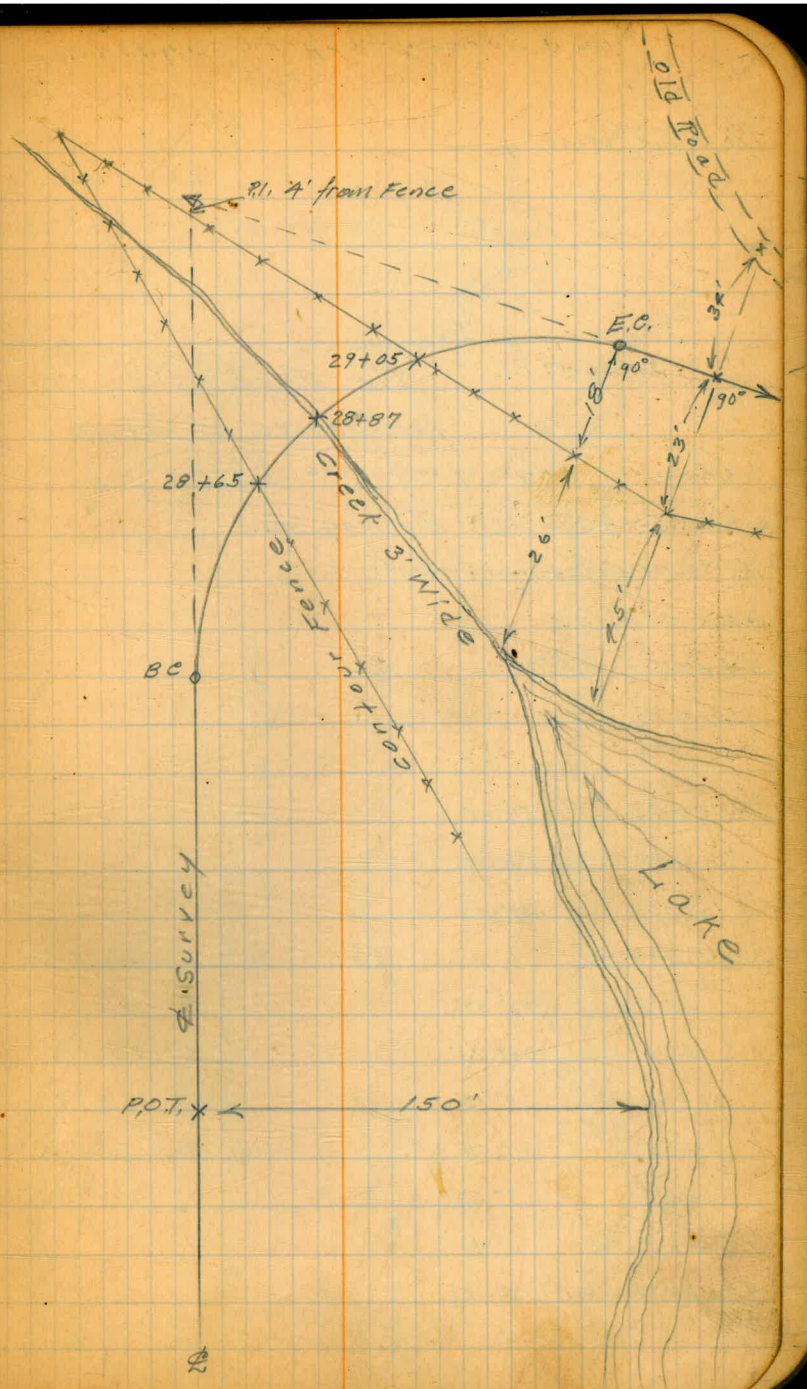
+50 21° 29' L 140.85

+25 9° 33' S.T. 143.08

28+05.02 B.C. 0° 00' Ext. 95.1

465.85

26+14.26 P.O.T.



⑦ ⑧ Road Survey – Upper Otay Dam.

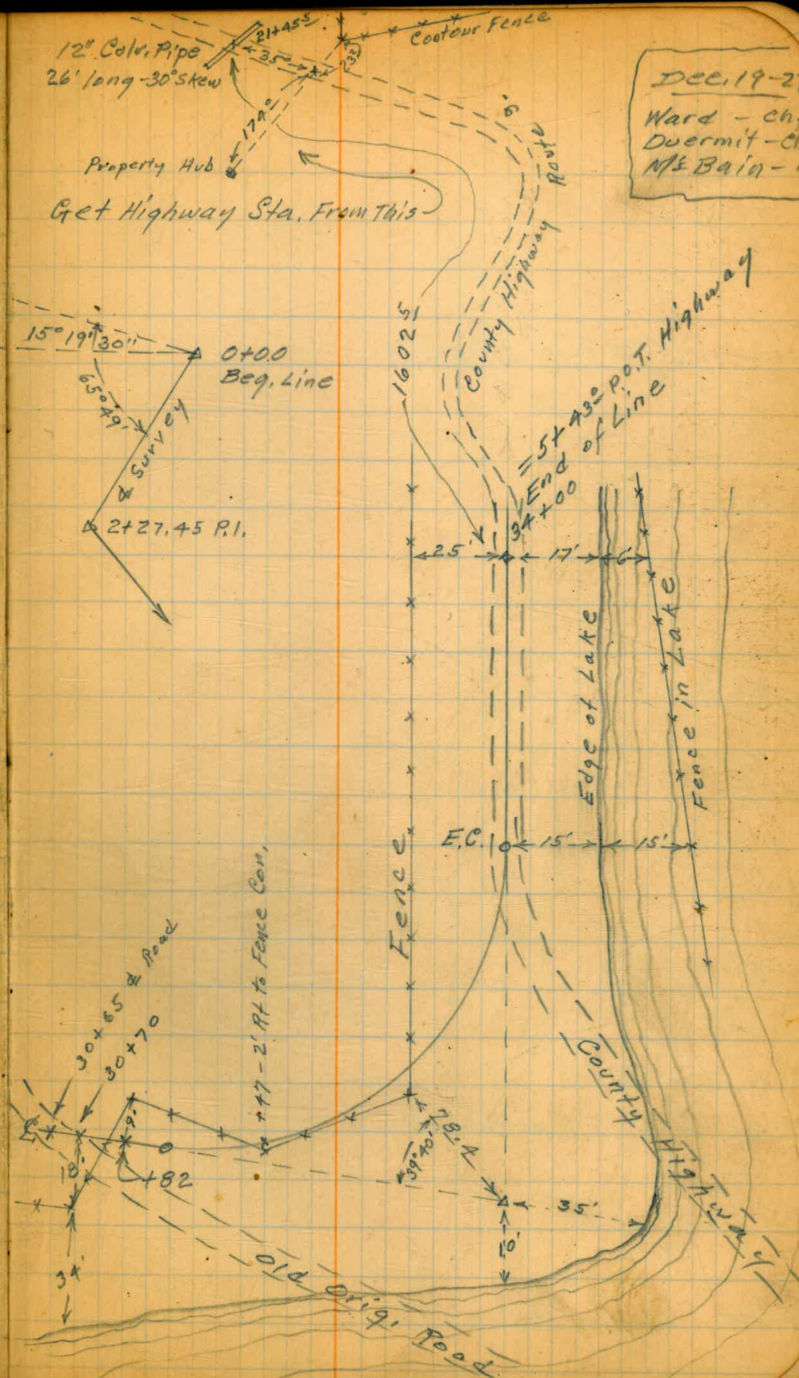
Tie Across Lake
for Closure of Survey.

Equation on Highway under Lake $\frac{0+00}{499+09.4}$

= Sta. 5+43.0 P.O.T. Highway Sta.
℄ County Highway Route 9.
End of Line
34+00.0 P.O.T.

33+00.45 E.C.	57°00'	253.54	Mag. S 28° 40' E	
33+00	56° 52'			
+75	49° 43'			
32+55.47 P.I.				Δ 114° 00' Lt.
+50	42° 33'			R 100
+25	35° 23'			L 198.97
32+00	28° 13'			S.T. 153.99
+75	21° 04'			Ext. 83.6
+50	13° 54'	452.68		
+25	6° 44'			
31+01.48 B.C.	0° 00'			

Dec. 19-27
Ward – Chf
Duermit – Chm
McBain – "



9 C' alternate Crossing of upper Otay

Sta.

~~7+97 60/15+81 47 = C'/C POT A 9°20' Rt Abandoned~~

6+52.74 PI ~~P.O.T~~

contin. page 22

6+16 E.B = H.W.M

3+37 93 E.C.

+25 — 5-28.3 — ~~3° 32~~

Δ = 14-40-20

3+00 — 1° 54.3

R = 200

S.T = 25.75

L.A = 51.21

3+12.47
 25.75
2+86.72
 51.21
3+37.93

2+86 72 BC 0°00

3+12 47 PI Δ 14-40-20 Rt = H.W.M.

1+65 07 P.O.T ~~Δ 8°00 Rt~~

1+16 46 P.O.T.

0+00 = Wards C' line 0+00

From Ward's C' line 1+16.46 BC Lt tang. produced

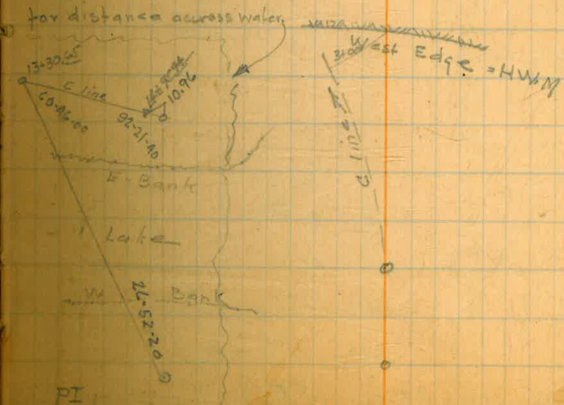
March 9-28
P.O.G.
Leach
Simpson

176.25 = 2.246129
26-52-20 = 9.655141
2.590988
60-96 = 9.940834
2.531822 = 340.27 ✓
1734
88

L. Otay Lake

W.S. 9-3-28

for distance accross water



Profile Levels over C' line

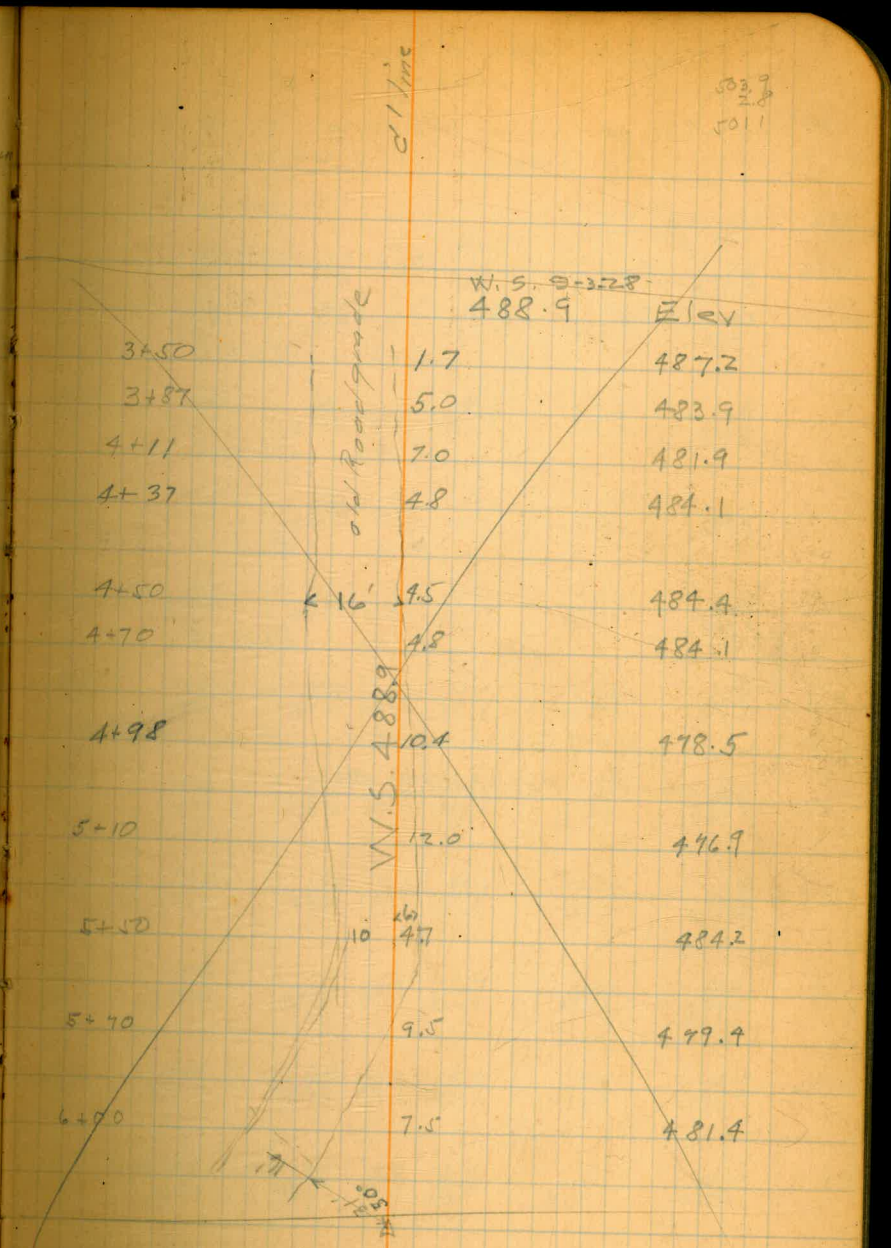
			501.6	Elev. Sta. 2+00
	2.3	503.9		
1+16.4	P.O.T.		7.1	496.8
			5.0	498.9
1+50				
2+00			5.3	498.6
2+50			7.4	496.5
3+00			11.1	492.8
3+14	H.W.M.		13.2	490.7
3+25	W.S.		15.5	488.4

↓ see opposite side

see next page for cross-sections

6+11			15.5	488.4
6+16			13.7	490.7
6+38			39	500 ~~499.7~~

continued on page 48



Profile levels on C' line

	503.9		
6+50		1.1	502.8
		0.2	503.7
	13.9 / 3 17.6		
7+00		8.8	508.8
7+50		2.6	515.0
+65		0.6	517.0
7+97 60 C' / 15+81 47 C		0.4	517.2
Check on Sta. 16+00 C line		0.7	516.9 = 516.8

for contin. see page 48

Soundings on C' line

W.S. = 488.4

← 25 →	← 15 →	← 10 →	← 10 →	← 15 →	← 25 →		Sta.
				6+25 0.0 / 488.4	+20 2.0 / 490.4	0.0 / 488.4	6+25
6+05 0.0 / 488.4	0.0 / 488.4	0.0 / 488.4	6+10 0.0 / 488.4	6+07 0.0 / 488.4	8.7 / 479.7	8.8 / 479.6	6+10
1.5 / 486.9	7.4 / 481.0	6.5 / 481.9	7.8 / 480.6	5.7 / 482.7	5.2 / 483.2	4.3 / 484.1	6+00
14.5 / 473.9	15.0 / 473.4	14.6 / 473.8	10.3 / 478.1	4.5 / 483.9	10.0 / 478.4	9.8 / 478.6	+75
14.8 / 473.6	14.4 / 474.0	9.6 / 478.8	4.8 / 483.6	9.0 / 479.4	10.0 / 478.4	13.5 / 474.9	5+50
15.6 / 472.8	15.0 / 473.4	7.7 / 480.7	8.3 / 480.1	11.6 / 476.8	20.0 / 468.4	20.0 / 468.4	+25
18.0 / 470.4	13.9 / 474.5	11.0 / 477.4	11.3 / 477.1	11.0 / 477.4	13.4 / 475.0	17.0 / 471.4	5+00
18.3 / 470.1	15.4 / 473.0	9.2 / 479.2	4.3 / 484.1	10.0 / 478.4	12.0 / 476.4	19.3 / 469.1	+75
17.6 / 470.8	17.3 / 471.1	12.0 / 476.4	4.3 / 484.1	4.6 / 483.8	10.0 / 478.4	16.2 / 472.2	√ 4+50
16.9 / 471.5	16.2 / 472.2	11.0 / 477.4	4.2 / 484.2	4.0 / 484.4	10.0 / 478.4	13.9 / 474.5	+25
10.3 / 478.1	9.4 / 479.0	8.0 / 480.4	6.3 / 482.1	3.8 / 484.6	9.5 / 478.9	12.0 / 476.4	4+00
5.9 / 482.5	4.2 / 484.2	3.7 / 484.7	4.3 / 484.1	4.0 / 484.4	5.3 / 483.1	10.0 / 478.4	3+75
+ 0.3 / 488.1	0.7 / 487.7	1.5 / 486.9	1.1 / 487.3	2.2 / 486.2	2.5 / 485.9	5.3 / 483.1	3+50
			3+25 0.0		3+25 0.0 / 488.4	1.7 / 486.7	3+25
						0.0 / 488.4	3+11

(13) Road Survey - North side Lower Otay Lake.

"C" Line

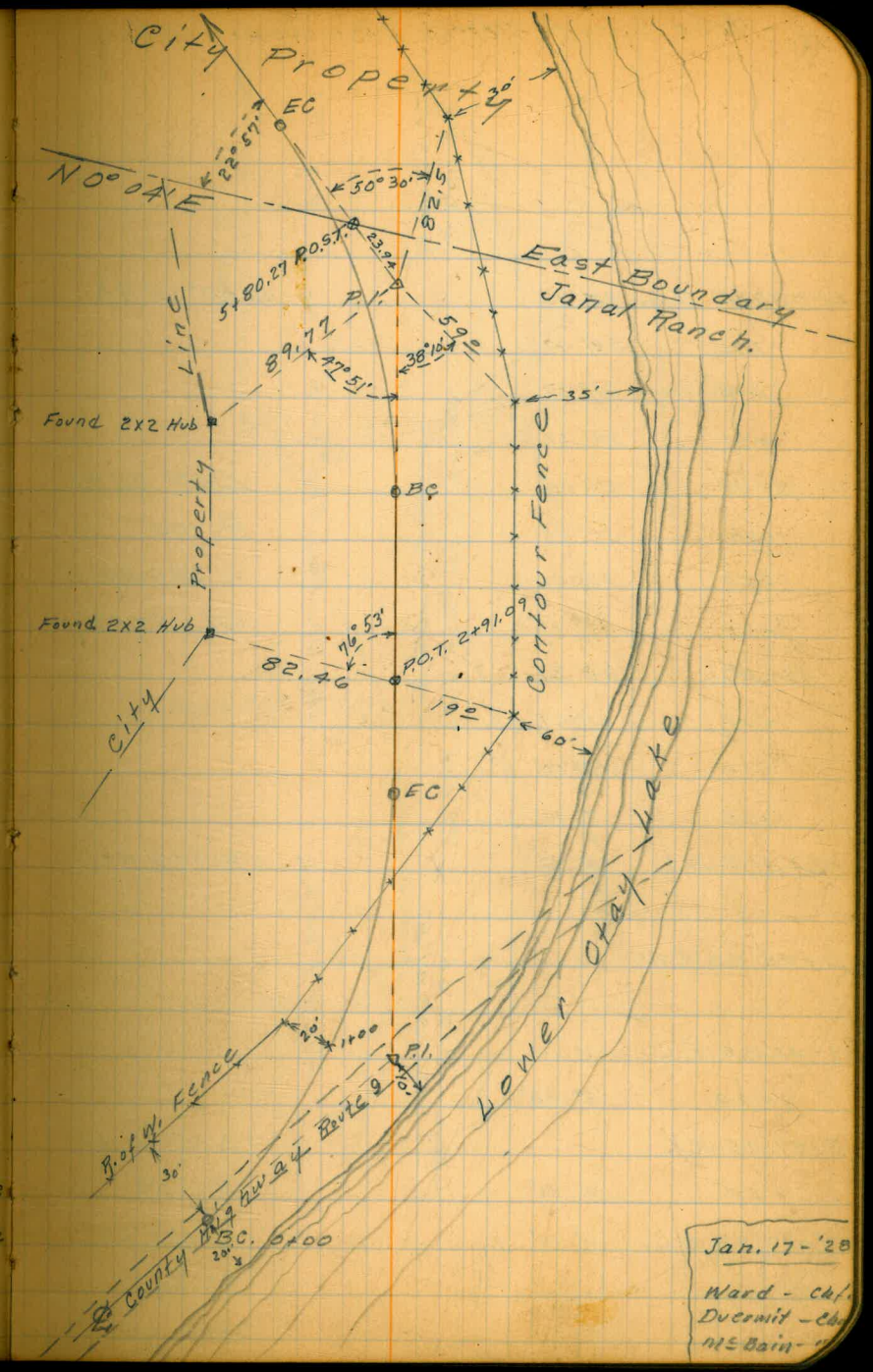
6+21.01 E.C.	12° 10'	331.42 N 23° 01' E	Mag. N 8° 10' E.
6+00	10° 10'		
5+58.28 P.I.			Δ 24° 20' Lt.
+50	5° 23'		R 300
5+00	0° 37'		L 127.41
4+93.60 B.C.	0° 00'		S.T. 64.68
			Ext. 6.9
2+91.09 P.O.T.		426.41 N 47° 02' E (Calc. by Solar)	Mag. N 32° 00' E
2+70.53 E.C.	15° 30'		
+50	14° 19'		
2+00	11° 28'		
+50	8° 36'		
1+38.66 P.I.			Δ 31° 00' Lt.
1+00	5° 44'		R 500
+50	2° 52'		L 270.53
0+00 = B.C.	0° 00'	138.66 N 78° 21' E	S.T. 138.66
= Sta. 83+85 Co. Highway.			Ext. 18.9

Approx. ℄ of County Highway Route № 9

For Highway Station at 0+00 "C".

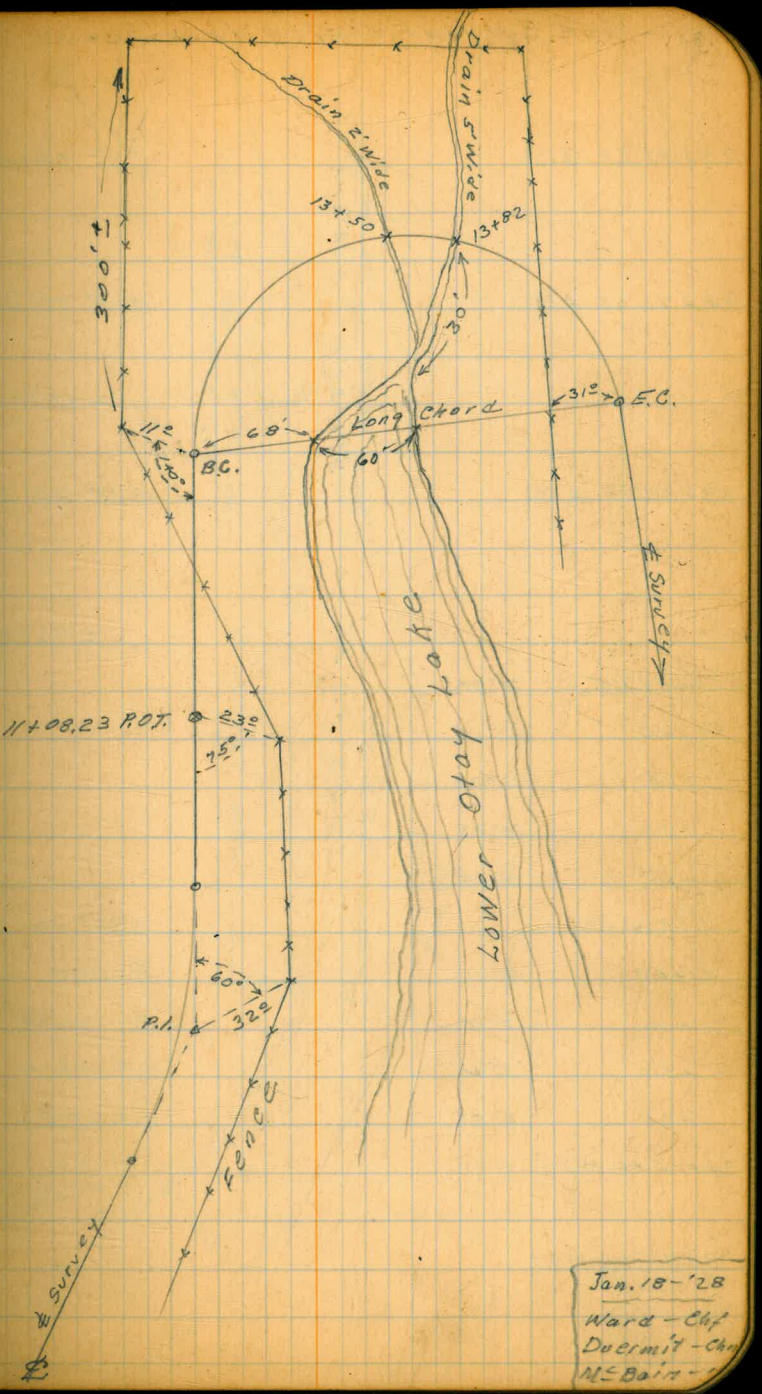
707 = ft. Back 0+00 = 26' of 24" Culv. Pipe

1394 = ft Back 0+00 = 26' of 36" Culv. Pipe
= Sta. 69+91 Co. Highway
Get Sta. from Highway map
of Co. Highway Route #9.



(14) Road Survey – North side Lower Otay.

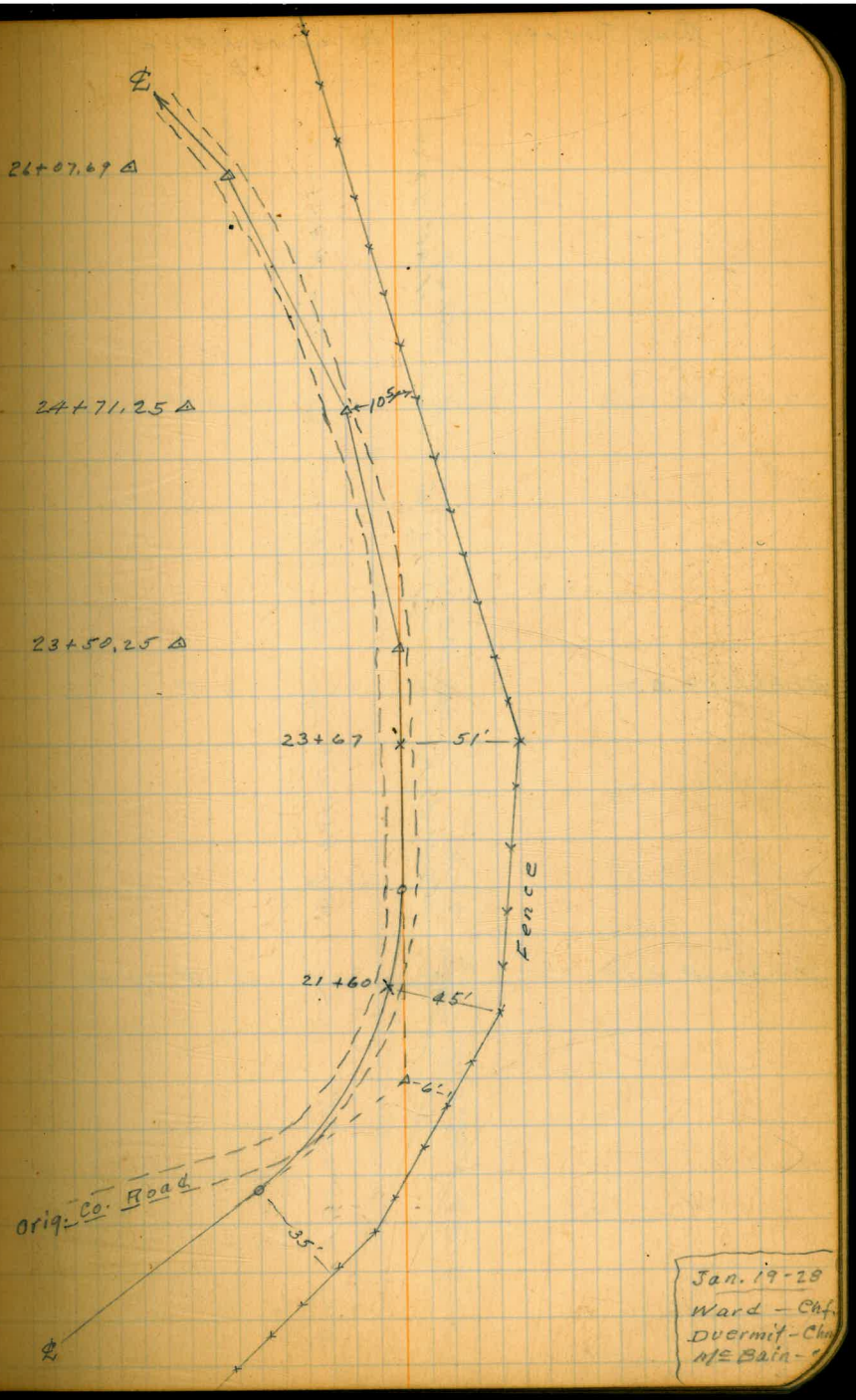
			637.11 S 80°53' E	Mag. S 88°50' E
14+80.00	E.C.	80° 13'	X	X Δ 80° 13' Rt.
+75		78° 47'		
+50		71° 37'		
+25		64° 27'		
14+00		57° 18'		Δ 160° 26' Rt.
+75		50° 08'	P.I. Not Set – Lg. Ch. = 197.09 S 89° 06' E	R 100
+50		42° 58'		L 280.00
+25		35° 49'		L.C. 197.09
13+00		28° 39'		Long. Ch. – Mag. S 88° 50' E
+75		21° 29'		
+50		14° 19'		
+25		7° 10'		
12+00	B.C.	0° 00'	X	X Δ 80° 13' Rt.
			312.66 N 10° 41' E	Mag. N 18° 30' E
11+08.23	P.O.T.			
9+41.36	E.C.	6° 10'		
9+00		3° 48'		
8+87.75	P.I.		X	X Δ 12° 20' Lt.
+50		0° 56'		R 500
8+33.73	B.C.	0° 00'		L 107.63
				S.T. 54.02
				Ext. 2.9



Jan. 18 – '28
Ward – Chf
Duermit – Chn
McBain –

(13) Road Survey – N. side Lower Otay.

26+07.69 Δ Lt.				Δ 5° 30' Lt.
		136.44	Mag. N 88° 30' E	
24+71.25 Δ Lt.				Δ 15° 00' Lt.
		121.00	Mag. S 76° 30' E	
		S 76° 33' E		
23+50.25 Δ Lt.				Δ 12° 40' Lt.
		252.37	Mag. S 64° 00' E	
		S 63° 53' E		
22+01.99 E.C.	27° 30'			
22+00	27° 13'			
+75	23° 38'			
+50	20° 03'			
+25	16° 28'			
21+14.11 P.I.				Δ 55° 00' Lt.
21+00	12° 53'			R 200
+75	9° 19'			L 191.99
+50	5° 44'			S.T. 104.11
+25	2° 09'			Ext. 25.5
20+10.00 B.C.	0° 00'			
18+83.31 P.O.T.				



Jan. 19-28
Ward – Chf.
Duermit – Chm
McBain –

Road Survey — N. Side Lower Otag.

32+36.14 Δ Lt.	351.64 N 40° 27' E	Mag. N 40° 45' E	Δ 7° 00' Lt.
31+32.09 Δ Lt.	104.05 N 47° 27' E	Mag. N 47° 40' E	Δ 17° 00' Lt.
30+36.18 Δ Lt.	75.91 N 64° 27' E	Mag. N 64° 40' E	Δ 18° 30' Lt.
	428.49 N 82° 57' E	Mag. N 83° 00' E	

(17)

Road Survey – N. Side Lower Otay.

39+34.88 Δ Lt. — Δ 18° 00' Lt.

84.06 — S 13° 13' E — Mag. S 13° 20' E

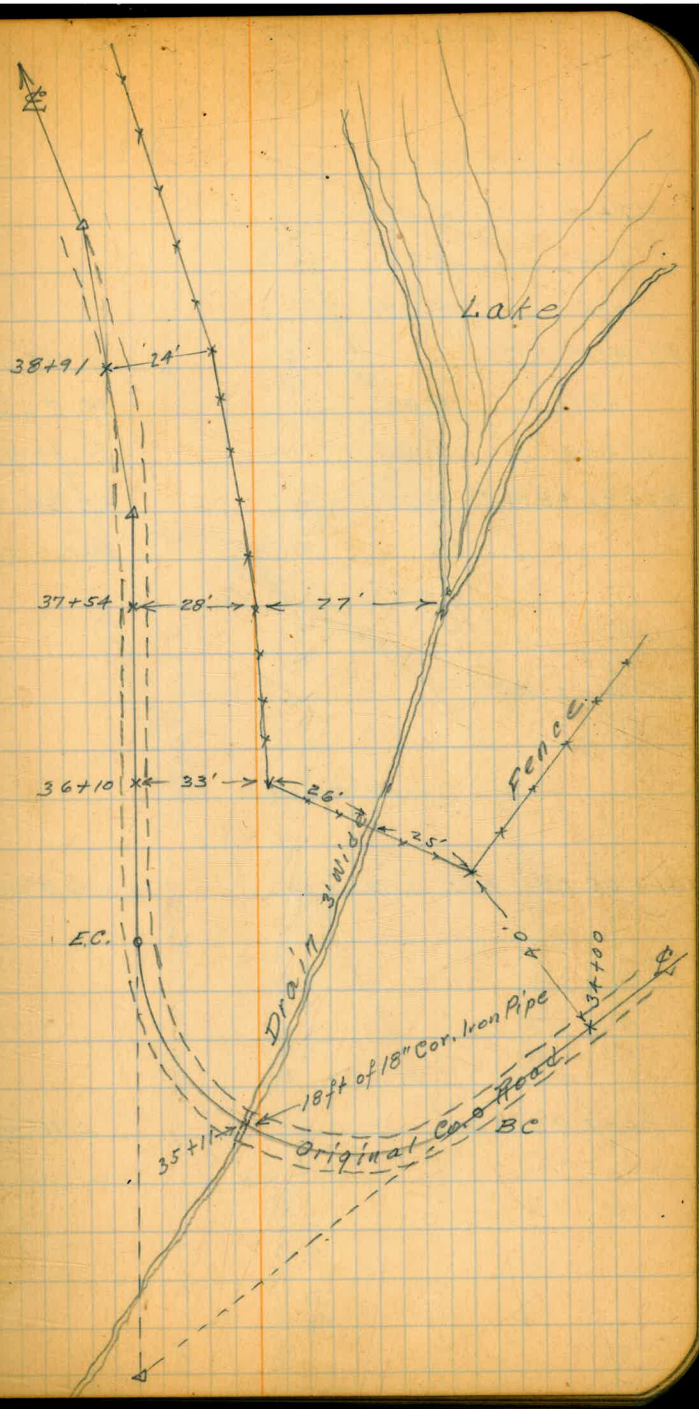
38+50.82 Δ Lt. — Δ 16° 00' Lt.

432.01 — S 2° 47' W — Mag. S 2° 45' W

35+65.40 E.C. 71° 10'
+50 62° 21'
+25 48° 01'

35+87.78 P.I. — Δ 142° 20' Rt.

35+00 33° 42' — R 50
+75 19° 22' — L 124.21
+50 5° 03' — S.T. 146.59
34+41.19 B.C. 0° 00' — Ext. 104.9



(18) Road Survey — N. Side Lower Otay.

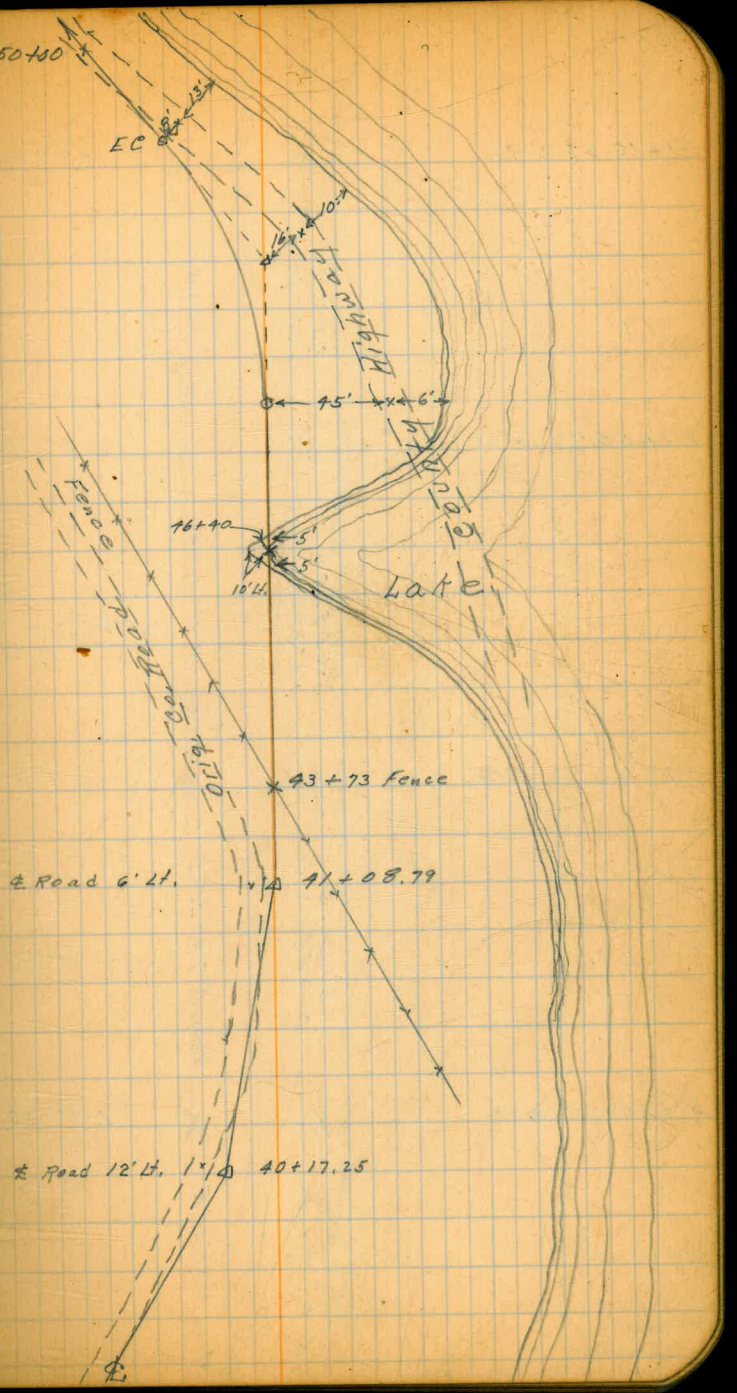
49+12.03 E.C. 18° 30'
49+00 16° 47'
+75 13° 12'
+50 9° 37'
48+49.80 P.I. Δ 37° 00' Lt.
+25 6° 02' R 200
48+00 2° 27' L 129.15
47+82.88 B.C. 0° 00' S.T. 66.92
Ext. 10.9

45+22.52 P.O.T.

41+08.79 Δ Lt. Δ 8° 00' Lt.

40+17.25 Δ Lt. Δ 16° 00' Lt.

741.01 S 55° 13' E Mag. S 55° 30' E
91.54 S 47° 13' E Mag. S 47° 30' E
82.37 S 31° 13' E Mag. S 29° 50' E



61+90.67 Δ Rt. — Δ 7° 10' Rt.

189.90
N 74° 07' E
Mag. N 74° 15' E

60+00.77 Δ Lt. — Δ 5° 30' Lt

559.06
N 79° 37' E
Mag. N 79° 30' E

54+41.71 Δ Rt. — Δ 1° 30' Rt.

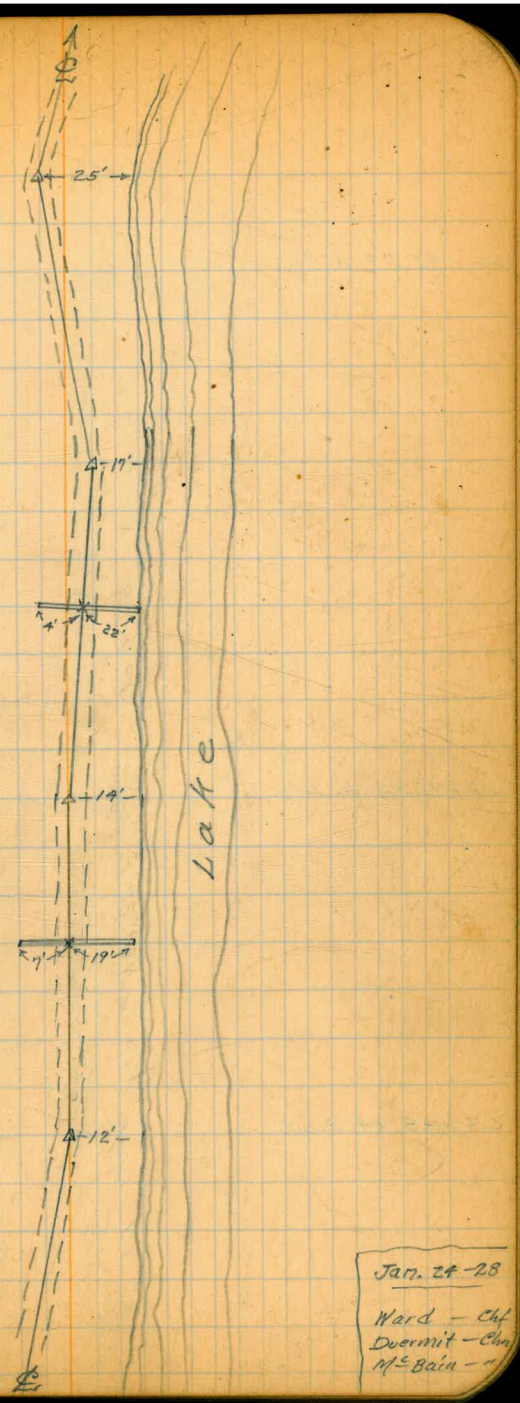
313.16
N 78° 07' E
Mag. N 78° 20' E

51+28.55 Δ Lt. — Δ 9° 40' Lt.

283.44
N 87° 47' E
Mag. N 88° 00' E

58+44 ± 12" Pipe in Highway 26 ft. Long.

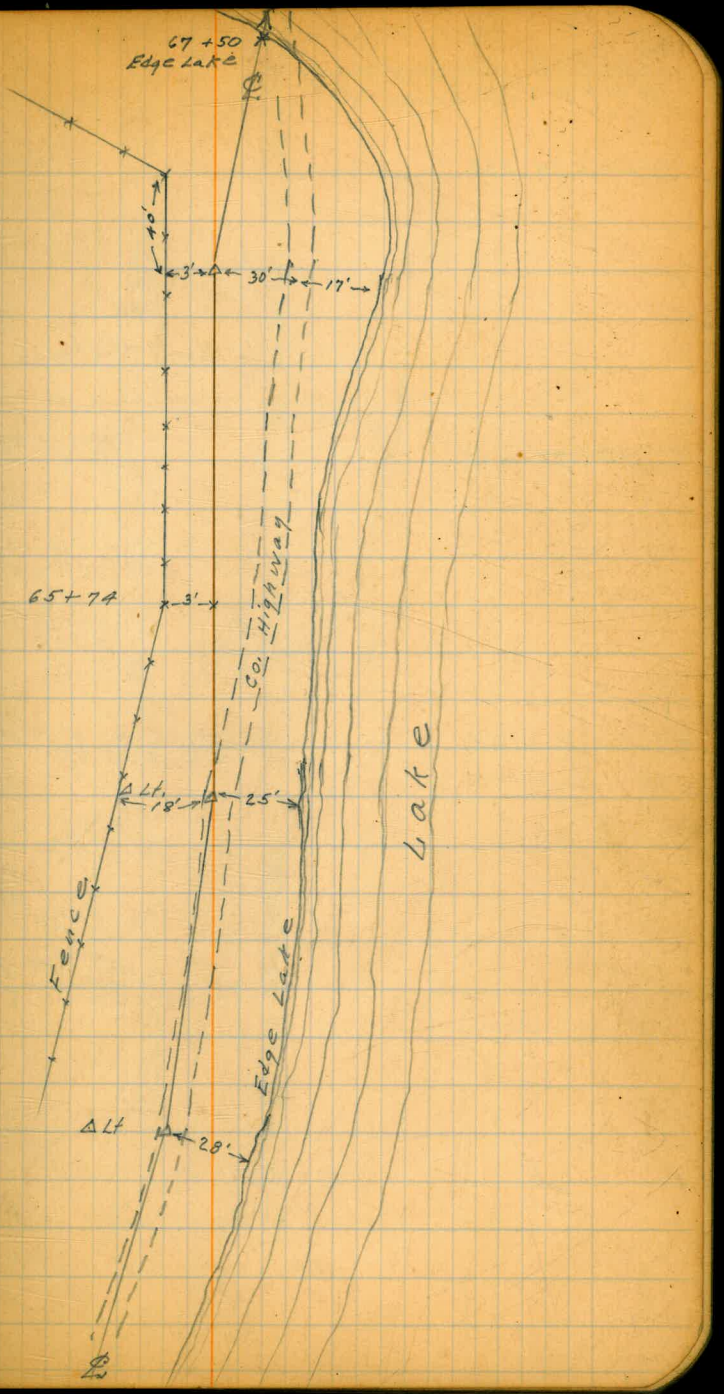
53+88 ± 12" Pipe in Highway 26' Long ±



Jan. 24-28

Ward – Chf
Duermit – Chm
McBain – m

66+87.59 △ Rt.			Mag. N 70° 20' E	△ 16° 00' Rt.
	196.29	N 54° 17' E		
			Mag. N 54° 15' E	
64+91.30 △ Lt.				△ 15° 20' Lt.
	142.86	N 69° 37' E		
			Mag. N 69° 40' E	
63+48.44 △ Lt.				△ 11° 40' Lt.
	157.77	N 81° 17' E		
			Mag. N 81° 20' E	



(21) See Note - Opposite page.

145+12 Sta. Co. Highway

76+00 End Line "C"

75+24.58 Δ Lt.

73+85.77 Δ Lt.

70+30.31 Δ Rt.

75+42 N37°17'E

138.81

N59°17'E

Mag. N59°40'E

355.46

N81°17'E

Mag. N81°15'E

342.72

N70°17'E

Mag. N70°20'E

Δ 22° 00' Lt.

Δ 22° 00' Lt.

Δ 11° 00' Rt.

Note:- For Highway Station Number at end of "C" Line carry Stations ahead from Tie's to Culvert Pipes at 53+88 and 58+44. Both Lines are within a foot of same length from these Pipes to end of "C" Cor Pipe Stations from Highway Map.

55'

60'

118.09

53°07'30"

17'

70+30.31

110° 52' 30"

70+06

By Calc. = 342.72

Co. Hwy.

Lake

68+50

67+90

12'

67+50

16°00'

66+87.59 Δ Rt.

(22)

C' line Transit notes

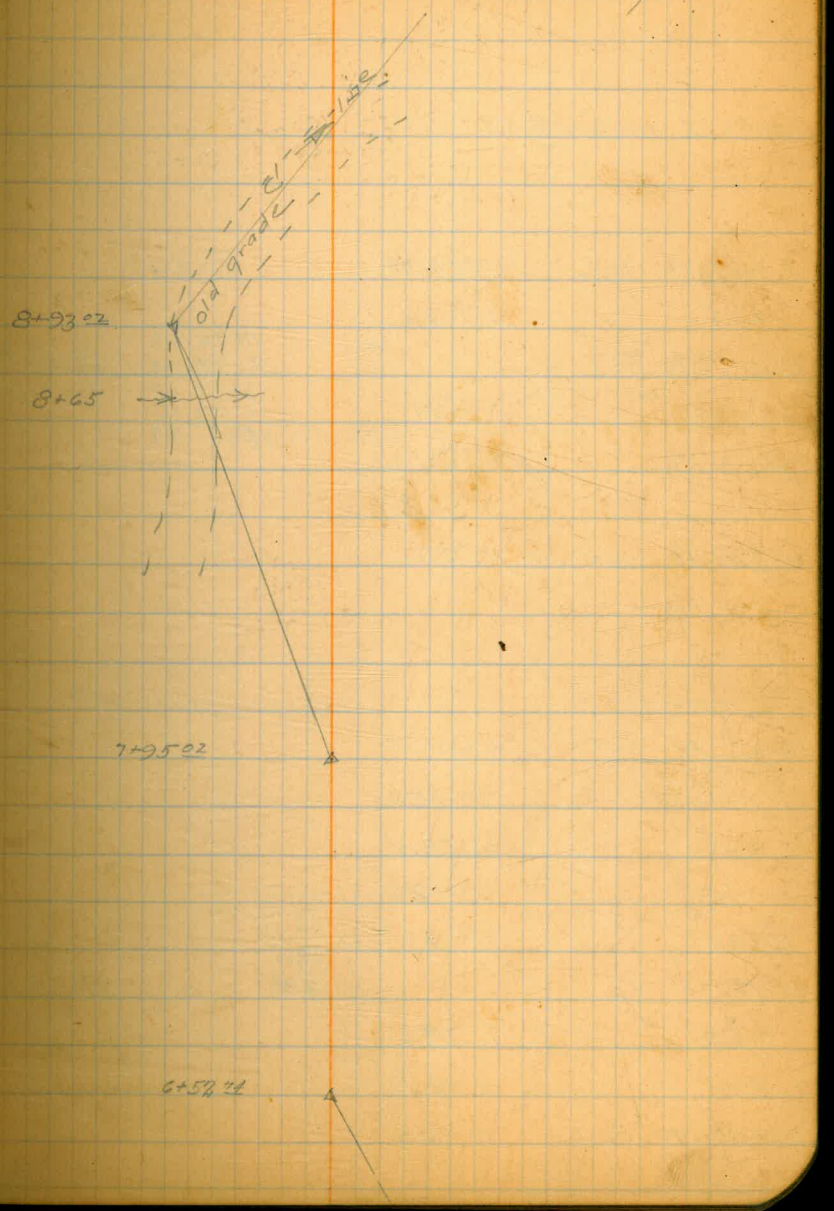
contin. from page 9

13-13-28.
Raining
P.O.G.
Leach
Simpson

9+26.34	E.C.	19°56			
+25		19-32.9			
9+00		12°23.2	8+93.02	R = 100	
			36.26	ST = 36.26	
8+93.02	PI		8+56.76	LA = 69.58	39-52 Rt
			69.58		
+75		5°13.5	9+26.34		
8+56.76	BC	0°00			

8+22.15	E.C.	15°56		R=100	
8+00		9-35.7		ST.=28.61	
7+95.02	PI			LA=	
				7+95.02	
				28.61	Δ 31°56 Lt
				7+66.41	
+75		2°26		55.74	
7+66.41	BC	0.00		8+22.15	

6+72.12	E.C.	11°15	R=100	6+52.74		
			ST=19.89	19.89		
			LA=39.27	6+32.85		
				39.27		
				6+72.12		
6+52.74	PI				22°30 Rt	
+50		4°54.79'				
6+32.85	BC	0°00				



(23) C' line contin

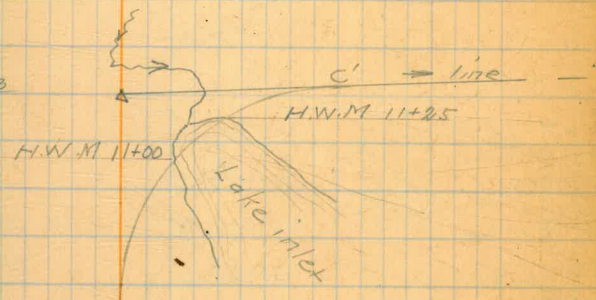
12+86.18 = C 22+52.57

11+51.94	E.C.	43°57-30	R=80'
+25		34°18	
11+06 33	PI		
11+00		25°21	
10+75		16°23.9	
+50		7°26 8	
10+29.19	B.C.	0°00	

11+06.33
ST. 77.14 87°55 Rt.
10+29.19
1 22 75
11+51.94

11+63.34	E.C.	43°57'30"	
11+50		40.08.0	
+25		32.58.3	
11+00		25-18.6	11+06 33
10+75		18-38.9	96.43
11+06 33	PI		10.09.90
+50		11-29.2	1 53 44
+25		4°19.5'	11+63.34 87°55 Rt.
10+09.90	B C	0°00	

13-3-28
P.O.G
Leach
Simpson



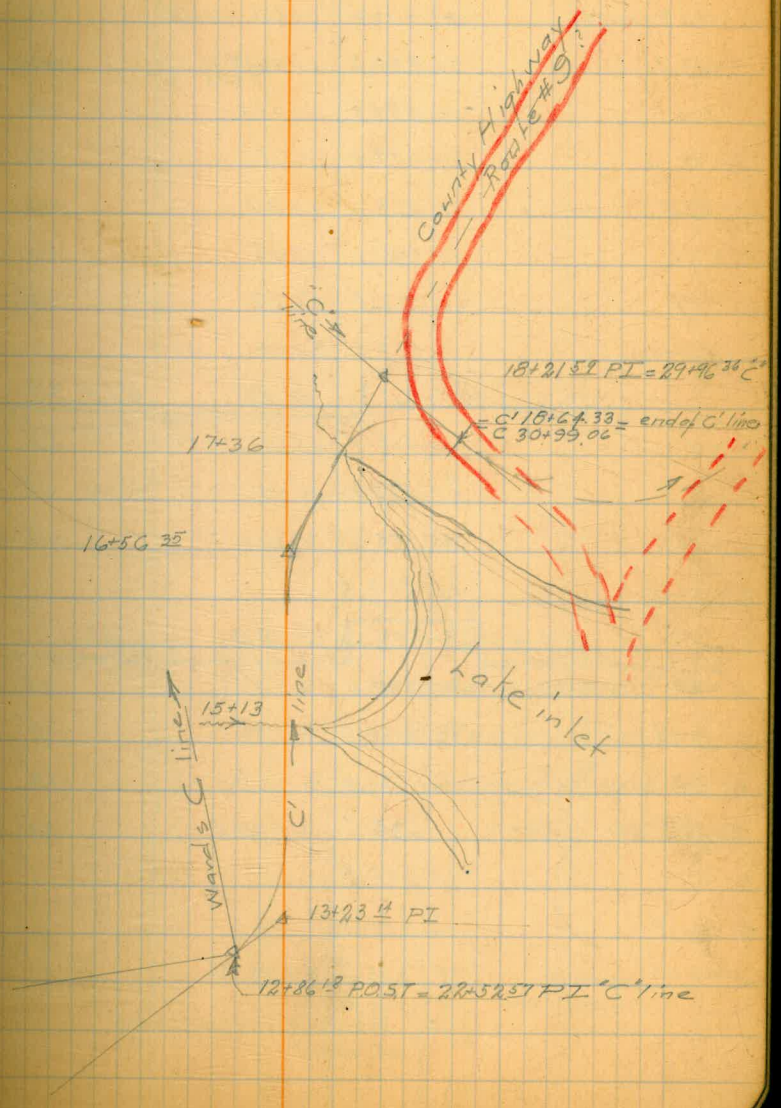
(24)

C' line contin.

=18+64.33 = EC		52-05			
=30+99.26 Ward's C line					
+50		46-59.1			
+25		38-02	R=80		
			18+21.59		
			102.70		
18+21.59	PI=29+96.36	C line	17+18.89	104°10 Rt	= C
			145.44		
18+00		29-04.7	18+64.33		
+75		20-07.5			
+50		11°08.4			
+25		2°11.3			
17+18.89	BC	0°00			
17+01.51	EC	28-28-30			
17+00		28-02.4	R=100		
+75		20-52.6	16+56.35		
			54.23		
			16+02.12		
16+56.35	PI		99.39	D=56°57 Rt	
			17+01.51		
+50		13-42.9			
+25		6-33.2			
16+02.12	B.C.	0°00			
13+60.97	EC	23°00	R=100		
+50		19°54.3	23.14		
			42.45		
13+25		12°41.6	12+80.69		
			80.28		
13+23.14	PI		13+60.97		
				46° Lt	
13+00		5°31.9			
12+80.69	B.C.	0°00			

13-3-28

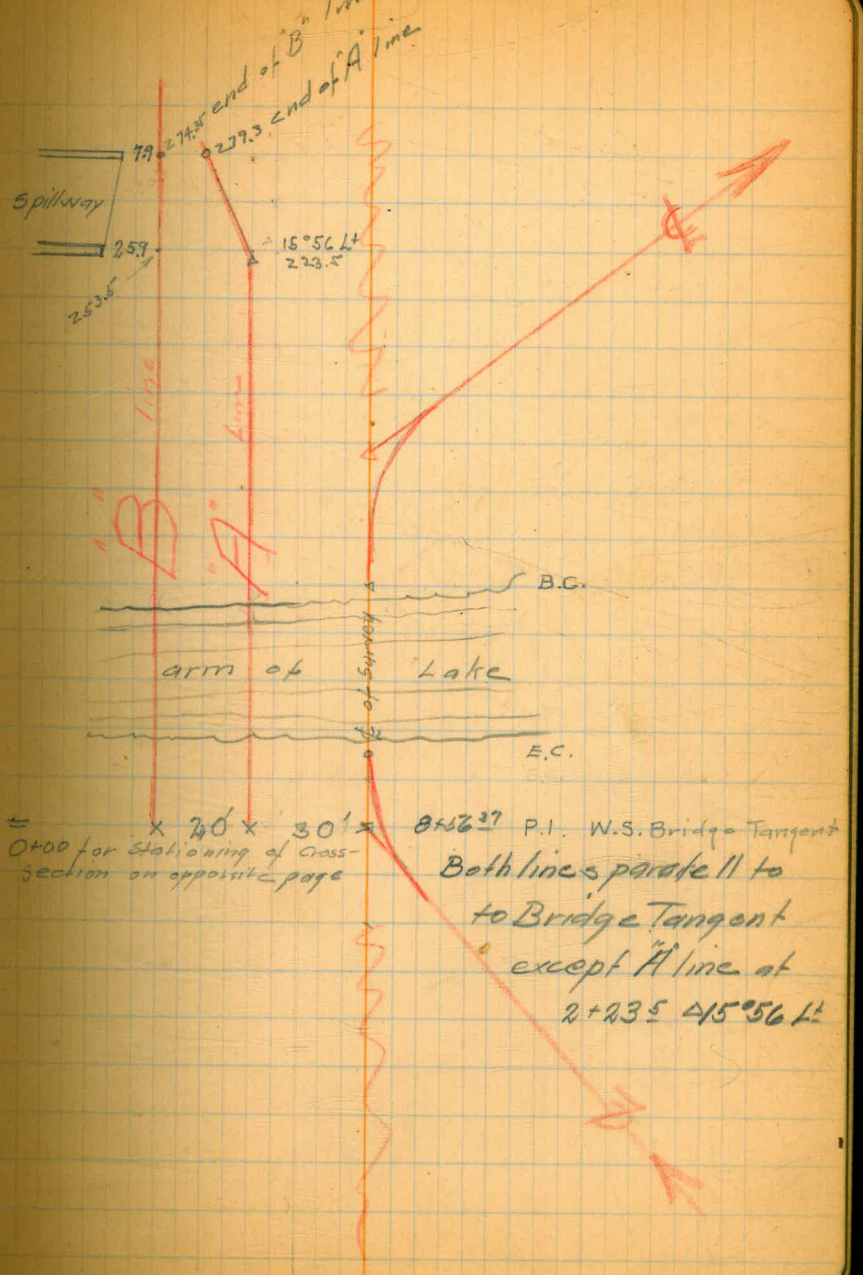
P.O.C



(25)

A & B lines being a Cross-section of Part of spillway B to be restricted spillway and A to be Retaining Wall to protect Road

Sta.	A line +	H.I.	− 510.95	Sta.	B line +	H.I.	− 510.95
	8.44	519.39			8.44	519.39	
1+08.8 = H.W.M.			28.8 4.914	1+04 = H.W.M.			28.0 491.4
1+09.5			25.4 494.0	1+06.7			26.9 493.4
1+16			24.5 494.9	1+17.6			27.2 492.2
1+19			20.4 499.0	1+25			19.0 500.4
1+29.4			15.2 503.5	1+40			14.6 504.8
1+48			11.3 508.1	1+65			13.4 506.0
1+79			6.65 512.8	1+77			7.25 512.2
1+87 on soil			1.7 517.7	2+09			1.0 518.4
	10.21	H.I. 520.60			6.00	519.39	
		529.60					
2+07			7.9 512.7	2+21			3.8 516.8
2+23.5			+0.3 520.9	2+29			6.6 514.0
2+28.5			10.8 509.8	2+35.6			4.4 516.2
2+34.8			8.1 512.5				
	10.96	531.56			0.00	529.60 520.60	
		−40.56					
2+39			7.0 524.6	2+37.5			8.9 522.7
2+44.3			8.9 522.9	2+45			6.9 524.7
2+49.5			3.6 528.0	2+52			1.3 530.3
2+52.3			1.1 530.5	2+65.5			2.6 529.0
2+68			2.4 529.2				
2+74.7			1.3 530.3				
2+79.3 against concrete Wall			+4.9 536.5	2+74.35			+0.6 532.2
			+0.4 536.0 Floor of spillway at end				



(28)

Levels on "G" Line. Fri. Jan. 20, 1928

North side Lower Otay Lake, Duermit, Level
McBain, Rod.

Sta.	+	H.I.	−	Elev. "A" Line.	
			B.M.	Sta. 0+00. 502.97	
	0.33	503.30			
			12.46	490.84	Water Level.
	10.87	501.71			
B.M. #1 -	25' Left. Sta. 0+60		0.80	500.91	Spike in Hub
	2.86	503.77			
0-1+00			3.3	500.5	
0-0+50			4.4	499.4	
0+00			5.8	498.0	
0+50			7.4	496.4	
1+00			8.7	495.1	
+15			6.7	497.1	
+50			6.6	497.2	
2+00			4.7	499.1	

4.5
499.3

Grade

See Page 65 for Road Bed Section.

		Lt.		℄		Rt		Excl. End Area.
-2.25%	499.37			0.0 ℄				
	498.25		0.0 13.2	FO 2 ℄				(0.0)
	497.125	C1 3 12.0	C1 6 11	0.0 9.0	FO 7 ℄			(2.5)
100' V. C.	496.74	C2 2 12.1	C2 2 11	0.0 1.5	F1 6 ℄	F1 6 11.4		(10.6)
	496.9		C2 5 12.3	C2 4 11	CO 2 ℄	0.0 0.5		(15.4)
	497.83	C1 4 11.7	C1 3 11	0.0 4.0	FO 6 ℄			(5.1)
+3.66%	499.66	C1 2 11.6	C1 0 11	0.0 5.0	FO 6 ℄			(3.3)

(29)

Sta.	+	H.I.	−	Elev.		℄ Grade	Lt	℄	Rt	Exc. End Area
		503.77								
2+50			1.6	502.2		501.49	C3 5/12.8 C3 2/11 C1 4/5	C0 7/℄	0.0 3.0	22.4
			1.91	501.86	T.P.					
	9.31	511.17								
2+75			7.8	503.4		502.41	C3 8/12.9 C3 3/11	C1 2/℄	0.0 4.0	28.8
3+00			7.1	504.1		503.33	C3 4/12.7 C3 2/11	C0 8/℄	0.0 4.0	25.2
+50			6.1	505.1		505.17	C2 3/12.2 C2 2/11	F0 1/℄ 0.0 0.5		11.8
4+00			4.9	506.3		506.48	C2 2/12.1 C1 8/11	F0 3/℄ 0.0 1.3		9.8
+50			4.0	507.2		506.75	C2 7/12.4 C2 4/11	C0 4/℄	0.0 1.5	17.4
5+00			4.6	506.6		506.50	C2 5/12.3 C2 1/11	C0 1/℄	0.0 0.5	13.6
+50			4.0	507.2		506.25	C2 7/12.4 C2 5/11	C0 9/℄	0.0 5.0	22.7
6+00			5.6	505.6		506.00	C2 0/12.0 C1 7/11	F0 4/℄ 0.0 1.5		9.0
			5.80	505.37	T.P.					
	8.04	513.41								
6+50			7.5	505.9		505.75	C3 2/12.6 C2 8/11	C0 1/℄	0.0 0.5	23.3
					+75	505.625				

+3.66 P.I.

100' V.C.

−0.50 P.I.

Sta.	+	H.I. 513.41	−	Elev.								Exc. End Area
30												
7+00			7.4	506.0		505.59	C2 8 / 12.4	C2 5 / 11	C2 0 / 8	C0 4 / ℄	0.0 / 1.6	18.5
					+25	505.75						
+50			7.1	506.3		506.00		C4 6 / 13.3	C3 8 / 11	C0 3 / ℄	0.0 / 1.0	27.6
8+00			7.1	506.3		506.50	C3 5 / 12.8	C3 0 / 11	0.0 / 0.5	F0 2 / ℄		18.7
+33 73	B.C.		6.3	507.1		506.84		C3 4 / 12.7	C3 0 / 11	C0 3 / ℄	0.0 / 1.5	21.0
+50			6.5	506.9		507.00	C3 2 / 12.6	C2 7 / 11	0.0 / 0.5	F0 1 / ℄		16.5
+75			5.6	507.8		507.25		C3 0 / 12.5	C2 8 / 11	C0 5 / ℄	0.0 / 2.0	20.7
9+00			6.2	507.2		507.50	C2 7 / 12.4	C2 4 / 11	0.0 / 1.0	F0 3 / ℄		13.8
+50			5.2	508.2		508.00		C2 0 / 12.0	C1 8 / 11	C0 2 / ℄	0.0 / 1.0	12.1
10+00			6.1	507.3		508.50	C1 3 / 11.6	C1 0 / 11	0.0 / 5.0	F1 2 / ℄	F4 3 / 15.5	3.3
BM. #2 - 25' Right, Sta. 10+00			10.22	503.19								
	9.48	512.67										
10+50			4.0	508.7		509.00	C2 7 / 12.4	C2 5 / 11	0.0 / 1.5	F0 3 / ℄		13.7
+75			2.2	510.5		509.06		C4 4 / 13.2	C3 8 / 11	C1 4 / ℄	0.0 / 6.4	37.6
11+00			1.4	511.3		508.75		C4 6 / 13.3	C4 3 / 11	C2 5 / ℄	C1 5 / 11	C1 5 / 11.8 65.0

50' V.C. — ± Grade

+1.0 %

100' V.C.

Sta	+	H.I.	−	Elev.	
(31)		512.67			
11+50			1.4	511.3	
+60			0.8	511.9	
+75			3.3	509.4	
12+00	BC.		5.3	507.4	
+25			7.2	505.5	
+50			9.4	503.3	
+75			12.5	500.2	
			12.72	499.95	T.P.
	5.10	505.05			
13+00			7.8	497.3	
+25			10.3	494.8	
+45			11.1	494.0	
+50			13.3	491.8	

100' V.C.

℄ Grade

Exc. End Area

507.00	C7 0/14.5	C6 6/11	C4 3/℄	C1 6/11	C1 4/11.7			(104.7)
506.50	C8 0/15.0	C7 6/11	C6 8/6	C5 4/℄	C2 6/6	C1 4/11	C1 3/11.6	(122.6)
505.75	C9 2/15.5	C7 2/11	C3 6/℄	C1 2/11	C0 9/11.5			(103.8)
504.50	C7 0/14.5	C6 3/11	C2 9/℄	0.0/12.0				(79.6)
503.25	C5 6/13.8	C4 7/11	C2 3/℄	0.0/10.0				(56.2)
502.00	C3 6/12.8	C3 4/11	C1 3/℄	0.0/9.0				(34.8)
500.75	C0 7/11.4	C0 6/11	0.0/7.0	F0 6/℄				(1.3)
	+85 = 0.0 − 11' Lt.							(0.0)
499.50		F0 8/10.2	F2 2/℄	F4 3/15.5				
498.56			F3 8/℄					
498.3			F4 3/℄					
498.25		F4 3/15.5	F6 5/℄	F5 0/16.5				

100' V.C.

Sta.	+	H.I. 505.05	−	Elev.	℄ Grade					Exc. Emb. Area
13+55			11.8	493.3	498.3			F5 0 ℄		
+75			13.0	492.1	498.56		F6 2 18.3	F6 5 ℄	F6 3 18.5	
+85			14.0	491.1	498.9			F7 8 ℄		
+90			11.0	494.1	499.0			F4 9 ℄		
					+95=0.0 −11' Lt.					(0.0)
14+00			6.7	498.4	499.50	C1 3 11.7	C1 0 11	0.0 6.0	F1 1 ℄	(2.9)
			3.18	501.87 T.P.						
	12.90	514.77								
14+25			9.5	505.3	500.75	C6 8 14.4	C6 2 11	C4 5 ℄	C2 3 11	C2 1 12.1	(108.5)
+50			6.8	508.0	502.00	C8 0 15.3	C7 8 11	C6 0 ℄	C4 3 11	C3 7 12.9	(154.0)
+75			4.7	510.1	503.25	C10 0 16.0	C9 0 11	C6 8 ℄	C4 3 11	C3 9 13.0	(170.3)
15+00			4.9	509.9	504.50	C8 8 15.4	C7 8 11	C5 4 ℄	C3 4 11	C2 9 12.5	(141.5)
+50			3.7	511.1	507.00	C7 4 14.7	C6 8 11	C4 1 ℄	C2 9 11	C2 8 12.4	(113.3)
16+00			3.0	511.8	509.50	C4 8 13.4	C4 2 11	C2 3 ℄	0.0 12.5		(55.5)

(33)

Sta.	+	H.I. 514.77	−	Elev.
16+25			2.7	512.1
+50			2.9	511.9
17+00			2.7	512.1
+25			4.1	510.7
+50			4.5	510.3
+75			3.6	511.2
18+00			4.3	510.5
+35			3.7	511.1
+50			4.4	510.4
18+83 31 POT			3.8	511.0
19+00			5.0	509.8
+25			6.5	508.3
+50			6.8	508.0

	℄ Grade					Exc. End Area
	510.55		C3 7 / 12.9	C3 4 / 11	C1 5 / ℄	0.0 / 6.5	(35.0)
	511.22	C4 2 / 13.0	C3 4 / 11	C1 5 / 5	C0 7 / ℄	0.0 / 4.5	(26.0)
	511.40		C3 5 / 12.8	C3 4 / 11	C0 7 / ℄	0.0 / 3.0	(26.7)
	511.10	C2 6 / 12.3	C2 3 / 11	0.0 / 1.5	F0 4 / ℄		(12.4)
	510.80	C2 7 / 12.4	C1 2 / 11	0.0 / 2.2	F0 5 / ℄		(10.0)
	510.50		C3 4 / 12.7	C2 8 / 11	C0 7 / ℄	0.0 / 3.0	(22.9)
	510.20		C2 7 / 12.4	C2 2 / 11	C0 3 / ℄	0.0 / 1.5	(17.7)
	509.78		C3 4 / 12.7	C2 8 / 11	C1 3 / ℄	0.0 / 7.0	(29.6)
	509.60		C3 2 / 12.6	C2 9 / 11	C0 8 / ℄	0.0 / 5.0	(24.8)
	509.20		C3 3 / 12.7	C3 1 / 11	C1 8 / ℄	0.0 / 11.0	(39.5)
	509.00		C2 7 / 12.4	C2 5 / 11	C0 8 / ℄	0.0 / 5.0	(22.0)
	508.17		C2 7 / 12.4	C2 4 / 11	C0 1 / ℄	0.0 / 0.5	(15.7)
	507.34		C3 8 / 12.9	C3 4 / 11	C0 7 / ℄	0.0 / 3.0	(27.0)

100' V.C.

1.20%

3.33%

(34)

Sta.	+	H.I. 514.77	−	Elev.	Remarks
20+00			8.7	506.1	
BM. # 3	25' Right 20+00		11.95	502.82	Nail in Hub.
	7.56	510.38			
20+25			5.0	505.4	
+50			6.1	504.3	
+75			6.3	504.1	
21+00			6.5	503.9	
+25			7.1	503.3	
+50			6.7	503.7	
+75			5.9	504.5	
22+00			5.6	504.8	
+30			4.3	506.1	
+50			4.6	505.8	

℄ Grade							Exc. End Area
505.69	C2 2 / 12.1	C2 2 / 11	C1 7 / 5	CO 4 / ℄	0.0 / 2.5		(18.7)
− 3.33 %							
504.83		CO 9 / 11.5	C1 2 / 11	CO 6 / ℄	0.0 / 3.0		(9.9)
50' V.C.							
504.24		CO 5 / 11.3	CO 5 / 11	CO 1 / ℄	0.0 / 0.5	F2 5 / 12.7	(3.6)
504.125	C2 1 / 12.1	C2 0 / 11	0.0 / 7.5	0.0 / ℄			(4.6)
504.25	C1 3 / 11.7	C1 1 / 11	0,0 / 6.5	FO 4 / ℄	FO 8 / 10.2		(2.9)
504.37	CO 2 / 11.5	CO 2 / 11	0.0 / 7.0	F1 1 / ℄			(2.0)
+ 0.50 %							
504.50	CO 7 / 11.4	CO 6 / 11	0.0 / 8.8	FO 8 / ℄	F2 6 / 12.9		(0,8)
504.62	C1 2 / 12.0	C1 1 / 11	0.0 / 7.2	FO 1 / ℄			(3.3)
504.75	CO 7 / 11.4	CO 2 / 11	0,0 / 7,0	0.0 / ℄	F2 5 / 12.7		(1,3)
504.90	C2 8 / 12.4	C2 4 / 11	CO 7 / 8	C1 2 / ℄	0.0 / 11		(20.7)
505.00	C2 0 / 12.0	C1 8 / 11	CO 8 / 7	CO 8 / ℄	0.0 / 8.3		(15.0)

(35)

Sta.	+	H.I. 510.38	−	Elev.
23+00			4.8	505.6
+50 25	P.I.		5.3	505.1
24+00			5.1	505.3
+50			4.5	505.9
25+00			3.4	507.0
			3.64	506.74 T.P.
	7.57	514.31		
+50			6.6	507.7
26+00			5.1	509.2
+50			4.2	510.1
27+00			3.5	510.8
+50			4.5	509.8
28+00			4.8	509.5
+50			4.9	509.4

	℄ Grade						Exc. End Area	
8/0	505.25	C2 0 12.0	C1 7 11	CO 3 6	CO 3 ℄	0.0 5.0		(8.5)
−0.50	505.50	C2 0 12.0	C1 8 11	0.0 5.0	~~FO 4~~ ℄	FO 4 ℄ set 3' Lt. Angle		(6.4)
	505.75	C2 6 12.3	C2 4 11	C1 8 8	0.0 4.0	FO 5 ℄		(11.6)
	506.00	C2 4 12.2	C2 2 11	0.0 7.0	FO 1 ℄			(5.8)
	507.00	C2 6 12.3	C2 4 11	0.0 5.0	0.0 ℄	0.0 8.5		(8.9)
+2.0 8/0	508.00	C2 4 12.2	C2 2 11	C1 7 8	0.0 3.0	FO 3 ℄		(11.5)
	509.00	C2 8 12.4	C2 4 11	0.0 5.5	CO 2 ℄	0.0 7.0		(9.6)
	510.00	C3 5 12.8	C3 0 11	CO 4 6	CO 1 ℄	0.0 4.0		(12.9)
100' V.C.	510.62	C3 2 13.0	C3 5 11	C2 7 7	CO 4 3	CO 2 ℄	0.0 5.0	(23.7)
	510.50	C2 5 12.3	C2 3 11	C1 3 7	0.0 5.0	FO 7 ℄		(9.4)
−1.10	510.00		C1 8 11.9	C1 7 11	0.0 5.0	FO 5 ℄	F1 6 11.4	(6.8)
+25	509.75							
50' V.C.	509.66	C1 7 11.9	C1 6 11	CO 9 5	0.0 2.0	FO 3 ℄	FO 5 9.7	(9.6)

(36)

Sta	+	H. I. 514.31	−	Elev.	
28+75			4.6	509.7	
29+00			4.4	509.9	
+25			3.6	510.7	
+50			2.5	511.8	
+75			2.1	512.2	
30+00			2.5	511.8	
					+25
B.M. #4	Right	Sta. 30+00	3.44	510.87	Nail in Hub
	6.12	516.99			
30+50			3.4	513.6	
+75			4.1	512.9	
31+00			5.8	511.2	
+50			7.6	509.9	
+75			8.6	508.4	
32+00			8.6	508.4	

50' V.C. & Grade

509.92 C2 2 / 12.1 C2 2 / 11 C1 3 / 4 0.0 / 1.0 FO 2 / ℄ — (14.7)

510.33 C1 1 / 11.6 C1 0 / 11 0.0 / 2.5 FO 4 / ℄ FO 8 / 10.2 — (4.6)

+1.66% — 510.75 C1 4 / 11.7 C1 3 / 11 0.0 / ℄ — (7.6)

511.17 C1 3 / 11.7 C1 2 / 11 CO 6 / ℄ 0.0 / 1.5 — (10.8)

511.58 C1 7 / 11.9 C1 6 / 11 CO 6 / ℄ 0.0 / 3.0 — (13.7)

50' V.C. — 511.80 C1 2 / 11.6 C1 2 / 11 0.0 / ℄ — (7.0)

511.62

511.25 C2 9 / 12.5 C2 8 / 11 C2 3 / ℄ C1 0 / 11 C1 0 / 11.5 — (48.5)

-1.50% — 510.87 C3 6 / 12.8 C3 4 / 11 C2 0 / ℄ CO 8 / 11 CO 7 / 11.4 — (48.3)

510.50 C2 5 / 12.3 C2 3 / 11 CO 7 / ℄ 0.0 / 6.0 — (20.1)

509.75 C1 0 / 11.5 CO 9 / 11 0.0 / 5.0 FO 4 / ℄ — (2.9)

509.37 C1 3 / 11.7 C1 2 / 11 CO 5 / 3 0.0 / 2.5 F1 0 / ℄ — (7.3)

509.00 C1 1 / 11.6 C1 0 / 11 0.0 / 5.0 FO 6 / ℄ FO 8 / 10.2 — (3.3)

(37)

Sta.	+	H.I. 516.99	−	Elev.	
32+50			8.4	508.6	
33+00			9.6	507.4	
+50			10.6	506.4	
			10.52	506.47	T.P.
	3.71	510.18			
34+00			4.4	505.8	
+50			4.8	505.4	
+75			5.7	504.5	
35+00			5.6	504.6	
+25			6.1	504.1	
+50			6.0	504.2	
+75					+7.5
36+00			4.8	505.4	
+25			4.3	505.9	
+50			4.7	505.5	

℄ Grade							
508.25	C1 1 11.7	C0 1 11	C0 4 6	C0 3 ℄	0.0 5.0		6.4
507.50	C1 7 11.9	C1 2 11	0.0 9.5	F0 1 ℄			1.4
506.75	C0 8 11.4	C0.7 11	0.0 9.0	F0 4 ℄			0.9
8.0							
1.50							
506.00	C0 8 11.4	C0 8 11	0.0 8.4	F0 2 ℄	F1 1 11.1		1.2
505.25	C0 8 11.4	C0 7 11	0.0 6.5	C0 1 ℄	0.0 5.5		2.3
	+60 = 0.0 − 11' Lt.						0.0
504.87			F0 1 9.6	F0 4 ℄	F0 4 9.6		
	+90 = 0.0 on ℄						0.0
504.50		0.0 9.5	C0 3 4	C0 1 ℄	0.0 3.5	F0 7 10.0	1.8
	+15 = 0.0 Exc.						0.0
504.62			F0 3 9.5	F0 5 ℄	F3 0 13.5		
8.0							
504.75			F0 7 10.0	F0 6 ℄	F0 7 10.0		
0.50	504.88		0.0 10.0	F0 2 ℄			0.0
505.00	C1 2 11.6	C1 2 11	0.0 7	C0 4 ℄	C0 4 6	0.0 8.5	6.5
505.12	C1 7 11.9	C1 3 11	C0 3 7	C0 8 ℄	C0 8 8	0.0 11.5	15.5
505.25	C1 7 11.9	C1 5 11	C0 3 7	C0 2 ℄	0.0 3.5		6.3

(38)

Sta.	+	H.I. 510.18	−	Elev.	Jun 25, 1928 Duermit, Level McBain Rod.
37+00			4.2	506.0	
+50			4.7	505.5	
+75			4.2	506.0	
38+00			4.6	505.6	
+50.82 P.I.			6.1	504.1	
B.M. # 5 - 23' Right Sta. 38+68			8.95	501.23	Nail in Hub.
	9.91	511.14			
39+00			7.3	503.8	
+50			5.3	505.8	
+75			4.0	507.1	
40+00			5.6	505.5	
+50			3.1	508.0	
+70			2.2	508.9	
41+00			2.8	508.3	

+0.50 % Grade

505.50 C1 5/11.8 C1 2/11 CO 3/9 CO 7/6 CO 5/℄ 0.0/9.5 (9.2)

505.75 CO 0.0/11.0 0.0/3.0 FO 3/℄ (0.0)

505.54 CO 3/11.2 CO 3/11 CO 6/6 CO 5/℄ CO 5/6 0.0/7.5 (9.0)

−0.833 %

505.34 CO 0.0/11.0 CO 4/4 CO 3/℄ 0.0/7.0 (3.8)

504.92 CO 3/11.2 CO 3/11 0.0/9.0 ~~FO 8/℄~~ FO 9/℄ FO 7/10.0 (0.3)
offset 3' Lt.

+75 504.71

50' V.C.

504.67 C2 3/12.2 C2 2/11 CO 9/4 0.0/3.0 FO 9/℄ FO 8/10.2 (11.8)

+25 505.00

505.50 CO 4/11.2 CO 3/11 0.0/10.5 CO 3/℄ 0.0/1.5 (1.9)

506.00 CO 8/11.4 CO 8/11 C1 1/℄ 0.0/3.0 (12.2)

+2.0 %

506.50 C1 2/11.6 C1 2/11 C1 2/9 0.0/2.0 ~~FO 9/℄~~ FO 7/℄ (6.1)
offset 2' Lt.

507.50 C1 3/11.7 C1 3/11 ~~CO 5/℄~~ CO 8/℄ 0.0/2.7 F1 8/11.7 (13.1)
offset 1' Lt.

507.90 C1 2/11.5 C1 2/11 C1 2/℄ 0.0/4.0 (13.2)

+75 508.00

V.C. 508.4 0.0/11.0 0.0/4.0 FO 1/℄ (0.0)

Sta.	+	H.I	−	Elev.	
		511.14			
41+25			3.4	507.7	
+50			3.2	507.9	
+75			2.5	508.6	
42+00			3.5	507.6	
+50			5.1	506.0	
			5.58	505.56	T.P.
	3.18	508.74			
42+75			3.3	505.4	
43+00			4.7	504.0	
+25			3.2	505.5	
+50			4.3	504.4	
44+00			4.9	503.8	
+50			4.8	503.9	
45+00			5.4	503.3	
+30			6.0	502.7	

150' V.C.

−2.80%

℄ Grade					℄				
508.7				FO^{6} / 9.9	$F1^{0}$ / ℄				
508.60	+70=0.0 Exc.			FO^{3} / 9.5	FO^{7} / ℄	$F2^{5}$ / 12.7			(0.0)
508.4			0.0 / 14.0	0.0 / 3.0	CO^{2} / ℄	0.0 / 1.0			(0.4)
508.0	CO^{8} / 11.4	CO^{8} / 11	CO^{9} / 7	0.0 / 2.0	FO^{4} / ℄				(5.8)
+25 507.40									
506.70		$C1^{5}$ / 11.8	$C1^{3}$ / 11	0.0 / 4.0	FO^{7} / ℄				(5.1)
506.00		CO^{5} / 11.3	CO^{5} / 11	0.0 / 6.0	FO^{6} / ℄				(1.3)
505.30		CO^{9} / 11.4	CO^{7} / 11	0.0 / 8.2	$F1^{3}$ / ℄				(1.1)
504.60			$C1^{1}$ / 11.6	$C1^{0}$ / 11	CO^{9} / ℄	$C1^{0}$ / 11	CO^{8} / 11.4		(21.4)
503.90			$C1^{0}$ / 11.5	CO^{9} / 11	CO^{5} / ℄	CO^{5} / 11	CO^{5} / 11.3		(13.5)
502.50			$C2^{8}$ / 12.4	$C2^{5}$ / 11	$C1^{3}$ / ℄	$C1^{2}$ / 11	$C1^{2}$ / 11.6		(18.0)
501.10		$C3^{4}$ / 12.7	$C3^{1}$ / 11	$C2^{7}$ / 5	$C2^{8}$ / ℄	$C3^{3}$ / 7	$C3^{4}$ / 11	$C3^{2}$ / 12.6	(71.2)
499.70		$C4^{4}$ / 13.2	$C4^{0}$ / 11	$C3^{5}$ / 7	$C3^{6}$ / ℄	$C3^{2}$ / 11	$C3^{1}$ / 12.6		(84.2)
498.86			$C3^{4}$ / 12.7	$C3^{4}$ / 11	$C3^{8}$ / ℄	$C3^{2}$ / 11	$C3^{0}$ / 12.5		(83.4)

(40)

Sta.	+	H.I.	−	Elev.		℄ Grade	Cross Section	
		508.74						
45+50			8.6	500.1		498.30	C2.6/12.3 C2.5/11 C1.8/℄ C1.9/11 C1.9/12.0	(46.6)
			10.47	498.27				
	8.23	506.50			+75	497.60	C0.9/11.5 C0.9/11 0.0/2.0 F0.3/℄	(4.3)
							+84 = 0.0 − 11' Lt.	(0.0)
46+00			11.7	494.8		497.05	F1.8/11.7 F2.3/℄ F3.3/14.0	
					+25	496.83		
+40			16.4	490.1		496.78	F5.0/16.5 F6.7/℄ F8.0/21.0	
Water Level			15.8	490.7				
+50			15.0	491.5		496.75	F3.8/14.7 F5.3/℄ F7.3/20.0	
+75			14.0	492.5		496.67	F2.4/12.6 F4.2/℄ F6.2/18.3	
47+00			11.1	495.4		496.60	0.0/11.0 F1.2/℄ F2.1/12.2	(0.0)
+50			6.7	499.8		496.45	C4.8/13.4 C4.6/11 C3.3/℄ C1.2/11 C1.2/11.6	(74.1)
+75			5.4	501.1		496.37	C6.0/14.0 C5.8/11 C4.7/℄ C2.8/11 C2.5/12.3	(109.5)
48+00			5.2	501.3		496.30	C7.4/14.7 C6.9/11 C5.0/℄ C2.8/11 C2.5/12.3	(122.9)
+25			5.3	501.2		496.22	C7.6/14.8 C7.0/11 C5.0/℄ C2.3/11 C1.9/12.0	(120.6)
+50			5.8	500.7		496.15	C7.0/14.5 C6.5/11 C4.5/℄ C1.9/11 C1.7/11.8	(107.9)
+75			7.2	499.3		496.07	C5.6/13.8 C4.9/11 C3.2/℄ C2.4/4.5 0.0/8.0	(68.2)

−2.80 %
50' V.C.
−0.30 %

Sta.	+	H.I. 506.50	−	Elev.	
(41)					
48+85			8.3	498.2	
49+00			11.1	495.4	
+30			12.8	493.7	
+50			13.1	493.4	
50+00			12.3	494.2	
B.M.#6-27'Left-Sta. 49+50			3.98	502.52	Nail in Hub
	2.78	505.30			
50+50			10.5	494.8	
51+00			10.2	495.1	
+50			10.1	495.2	
52+00			10.1	495.2	
			10.17	495.13	T.P.
	4.57	499.70			
52+50			4.9	494.8	
53+00			4.8	494.9	

℄ Grade						
496.04		C4 8/13.4	C4 3/11	C2 2/℄	0.0 3.5	(44.8)
496.00	C3 9/13.0	C3 3/11	C1 3/2.5	0.0 1.0	F0 6/℄	F2 8/13.2 (22.7)
495.91	C4 4/14.2	C3 7/11	C3 2/9	0.0 3.0	F2 2/℄	F2 5/12.7 (22.4)
495.85	C3 0/12.5		C2 3/11	0.0 6.0	F2 5/℄	F2 6/12.9 (7.5)
495.70	C1 5/11.8		C1 0/11	0.0 9.5	F1 5/℄	F1 5/11.2 (1.2)
495.55	C3 6/12.8		C2 6/11	0.0 7.5	F0 8/℄	(6.9)
495.40	C5 0/13.5		C4 0/11	0.0 5.5	~~F0 3/℄~~	F0 4/1℄ Offset 2' Lt. (16.0)
495.25	C4 6/13.3	C3 0/11	C0 6/7	0.0 5.0	~~0.0/℄~~	F0 1/℄ ← Offset 2' Lt. (11.2)
495.10	C4 9/13.5		C3 4/11	C0 5/6	C0 1/℄	0.0 9.0 (16.2)
494.95	C6 0/14.0		C3 8/11	0.0 4.0	F0 2/℄	(19.0)
494.80	C7 0/14.5		C4 4/11	C0 6/5	C0 1/℄	0.0 9.0 (24.8)

Sta.	+	H.I. 499.70	−	Elev.	
53+50			5.2	494.5	
54+00			5.2	494.5	
+50			4.7	495.0	
55+00			4.2	495.5	
+50			4.0	495.7	
56+00			3.8	495.9	
+50			3.5	496.2	
57+00			3.3	496.4	
			2.98	496.72	T.P.
	4.58	501.30			
57+50			4.7	496.6	
58+00			4.6	496.7	
+50			4.9	496.4	
59+00			4.8	496.5	

Sta.	℄ Grade						
	−0.30 %						
53+50	494.65	C6 8 / 14.4	C3 7 / 11	CO 3 / 6	0.0 / 4.0	FO 2 / ℄		16.6
54+00	494.50	C4 6 / 13.3	C3 2 / 11	C1 2 / 8	0.0 / 4.5	0.0 / ℄		11.2
+50	494.79	C4 8 / 13.4	C3 5 / 11	CO 4 / 7	CO 2 / ℄	0.0 / 9.0		15.0
55+00	495.08	C3 8 / 12.9	C2 6 / 11	CO 7 / 8	CO 4 / ℄	0.0 / 9.0		13.6
+50	495.37	C3 6 / 12.8	C2 5 / 11	CO 4 / 6	CO 3 / ℄	0.0 / 8.0		12.8
	−0.58 %						
56+00	495.66	C3 4 / 12.7	C2 3 / 11	CO 6 / 8	CO 2 / ℄	0.0 / 6.0		10.1
+50	495.95	C4 2 / 13.0	C2 7 / 11	CO 3 / 7	CO 2 / ℄	0.0 / 7.0		11.2
57+00	496.25	C7 2 / 14.6	C4 4 / 11	CO 7 / 5	CO 1 / ℄	0.0 / 9.0		25.6
57+50	496.54	C9 2 / 15.5	C5 4 / 11	CO 5 / 4	CO 1 / ℄	0.0 / 9.0		34.1
58+00	496.83	C9 2 / 15.6	C5 2 / 11	CO 6 / 4	0.0 / 2.0	FO 1 / ℄		32.9
+50	497.12	C6 4 / 14.2	C4 2 / 11	0.0 / 6.0	FO 7 / ℄	F7 3 / 20.0		16.4
59+00	497.41	C3 4 / 12.7	C2 3 / 11	0.0 / 7.5	FO 9 / ℄			5.9

Sta.	+	H.I. 501.30	−	Elev.	
(43)					
59+50			4.1	497.2	
60+00			3.3.	498.0	
+50			2.9	498.4	
61+00			2.2	499.1	
			1.95	499.35	T.P.
	12.92	512.27			
61+50			12.1	500.2	
62+00			11.1	501.2	
B.M. #7-30' Left. Sta. 62+00			1.06	511.21	Nail in Hub.
	3.27	514.48			
62+50			13.0	501.5	
63+00			14.3	500.2	
			12.27	502.21	T.P.
	0.97	503.18			
63+50			4.5	498.7	
64+00			5.7	497.5	

+0.583% ℄ Grade

497.71	C3 2/12.5	C2 2/11	0.0/8.0	FO 5/℄					(4.5)
498.00	C5 1/13.6	C2 8/11	CO 3/7	0.0/5.0	~~0/0~~ ℄	FO 1/℄ ← Offset 1' Lt.	0.0/1.0	0.0/4.0	(10.1)
498.70	C4 4/13.2	C3 2/11	0.0/6.5	FO 3/℄					(10.0)
499.40	C5 3/13.6	C4 1/11	0.0/5.0	FO 3/℄	0.0/4.0				(17.4)

+1.40%

500.10	C5 8/13.9	C3 2/11	CO 8/7	CO 1/℄	0.0/10.0				(16.3)
500.80		C1 5/11.8	C1 1/11	~~CO 4~~/℄	CO 3/℄ ← Offset 1' Rt.	0.0/7.0			(13.2)
501.15	+25								
501.24	C4 3/13.2	C2 8/11	CO 9/8	CO 3/℄	0.0/10.0				(14.9)
500.83	+75								
500.17	C7 4/14.7	C4 2/11	CO 3/5	0.0/3.0	0.0/℄	0.0/9.0			(20.6)

−2.666%

498.83	C6 6/14.3	C4 3/11	0.0/4.2	~~CO 1~~/℄	FO 3/℄ ← Offset 2' Lt.	0.0/9.0			(21.1)
497.50	C6 3/14.4	C5 2/11	C3 1/5	CO 4/2	0.0/℄	0.0/5.0			(39.4)

Sta.	+	H.I.	−	Elev.		℄ Grade	Cross-section	
		503.18						
64+50			5.9	497.3		497.25	$C5^{8}$ / 13.9, $C5^{0}$ / 11, $C4^{4}$ / 9, $C0^{5}$ / 4, 0.0 / ℄, 0.0 / 9.0	(29.9)
			5.70	497.48	T.P.			
	8.01	505.49						
65+00			9.0	496.5		497.00	$C5^{6}$ / 13.8, $C4^{8}$ / 11, $C2^{9}$ / 5, 0.0 / 2.0, ~~$F0^{5}$ / ℄~~, $F0^{5}$ / ℄ ← Offset 2' Lt., 0.0 / 13.0	(34.2)
+15			8.9	496.6		496.93	$C6^{1}$ / 14.1, $C5^{2}$ / 11, $C2^{7}$ / 3, ~~$F0^{3}$ / ℄~~, 0.0 / ℄ ← offset 1' Lt.	(43.7)
+40			5.9	499.6		496.80	$C7^{2}$ / 14.6, $C6^{4}$ / 11, $C2^{8}$ / ℄, 0.0 / 9.4	(68.3)
+50			5.5	500.0		496.75	$C8^{0}$ / 15.0, $C6^{4}$ / 11, $C3^{2}$ / ℄, $C2^{5}$ / 2, 0.0 / 5.8	(76.0)
+75			4.2	501.3		496.63	$C9^{6}$ / 15.8, $C7^{8}$ / 11, $C4^{7}$ / ℄, 0.0 / 9.5	(109.8)
66+00			3.3	502.2		496.50	$C10^{8}$ / 16.4, $C9^{2}$ / 11, $C5^{7}$ / ℄, $C2^{5}$ / 8, 0.0 / 11.0	(143.3)
+50			2.3	503.2		496.25	$C12^{6}$ / 17.3, $C10^{6}$ / 11, $C7^{0}$ / ℄, $C5^{5}$ / 3, 0.0 / 12.5	(175.1)
+70			1.2	504.3		496.15	$C13^{2}$ / 17.6, $C11^{3}$ / 11, $C8^{1}$ / ℄, $C7^{5}$ / 3, 0.0 / 13.5	(206.8)
67+00			2.0	503.5		496.00	$C12^{2}$ / 17.1, $C10^{4}$ / 11, $C7^{5}$ / ℄, $C6^{2}$ / 3, 0.0 / 10.0	(172.4)
+50			14.4	491.1		495.75	$C2^{1}$ / 12.1, $C1^{8}$ / 11, $C1^{4}$ / 9, 0.0 / 6.5, $F4^{7}$ / ℄, $F5^{5}$ / 17.2	(6.0)
Water Level →			14.8	490.7				
67+65						67+65	0.0 / 11.0, $F5^{6}$ / ℄, $F6^{0}$ / 18.0	(0.0)

−0.50%

−0.50%

493^{0} = Flood Water Elev.

(75)

Sta.	+	H.I 505.49	−	Elev.
68+00			16.8	488.7
+25			17.7	487.8
+50			18.2	487.3
+60			23.0	482.5
+75			24.0	481.5
+90			22.0	483.5
+95			19.0	486.5
69+00			19.0	486.5
+40			18.3	487.2
+50			19.5	486.0
+70			20.3	484.2
+90			18.6	486.9
70+00			17.3	488.2

All Under Water

Level Grade

~~Grade~~ 495.50

All Fill under Water

(46)

Sta.	+	H.I.	−	Elev.	
		505.49			
B.M. #8-57' Left.		Sta. 70+20	6.03	499.46	Nail in Hub
	3.56	503.01			
70+06	Water Level		12.3	490.7	
+17			7.2	495.8	
+30 31 Δ			4.8	498.2	
+50			3.8	499.2	
71+00			1.9	501.1	
+20			2.7	500.3	
+50			2.4	500.6	
			8.40	494.61	T.P.
	12.79	507.40			
72+00			6.5	500.9	
+50			8.1	499.3	
73+00			8.1	499.3	

℄ Grade

Level Grade

495.50 — F5 16.5 — F4.8 ℄ — F6 18.6

495.50 — 0.0 11.0 — CO3 ℄ — 0.0 3.0 ← 0.0 Section (0.0)

495.50 — C5 13.5 — C4.6 11 — C2.7 ℄ — C2.4 ℄ — 0.0 — 10.0 offset 1' Rt. (56.2)

495.50 — C7.1 14.6 — C6 11 — C3.7 ℄ — C1.6 8 — 0.0 10.5 (87.3)

495.75 — C8.1 15.1 — C7.4 11 — C5.3 ℄ — C3.2 5 — 0.0 9.0 (112.5)

+0.50 — 495.85 — C8.7 15.4 — C8 11 — C4.4 ℄ — C2.7 4 — 0.0 7.2 (104.3)

496.00 — C8 15.0 — C7.5 11 — C4.6 ℄ — C4.3 1.5 — 0.0 7.0 (100.0)

100' V.C.

496.25 — C8.3 15.2 — C7.1 11 — C5.2 1 — C4.6 ℄ — 0.0 5.5 (93.8)

496.93 — C7.2 14.6 — C6.6 11 — C5.6 5 — C2.4 ℄ — 0.0 4.0 — 0.0 11.0 (73.3)

(70.8)

498.50 — C8.8 15.4 — C7.1 11 — C4.6 4 — CO8 ℄ — 0.0 1.7 — 0.0 5.3 — CO5 7 — CO6 11 — CO6 11.3

(47)

Sta.	+	H.I. 507.40	−	Elev.	
73+50			7.1	500.3	
74+00			4.6	502.8	
+50			3.0	504.4	
75+00			0.4	507.0	
			0.92	506.48	T.P.
	7.78	514.26			
75+50			5.0	509.3	
76+00			4.2	510.1	
End of "C" Line					
B.M. # 9-45' Right Sta 76+00			5.90	508.36	Nail in Hub.

℄ Grade

(46.1)

500.50 C7 14.8 C6 11 C5 8 C1 4 0.0 1.5 FO ℄ 0.0 1.0 CO 3 CO 5 11 CO 5 11.3

(42.0)

502.50 C6 14.2 C5 11 C4 9 0.0 1.5 ~~CO~~ ℄ CO 2 1℄ offset 3' Lt. CO 7 11 CO 8 11.4

(36.2)

504.50 C5 13.6 C4 11 C4 8 0.0 2.8 FO ℄ 0.0 2.0 CO 8 13 0.0 15.0

(24.0)

506.50 C3 12.9 C3 11 0.0 5.0 ~~CO~~ ℄ CO 4 1℄ offset 2' Lt. C1 10 0.0 14.0

(17.7)

508.50 C3 12.5 C2 11 0.0 9.0 ~~CO~~ ℄ CO 8 1℄ offset 1' Lt. C1 11 C1 11.5

(4.4)

510.50 0.0 11.0 0.0 7 CO 5 0.0 1.0 FO ℄ 0.0 2.0 CO 8 11 CO 8 11.4

(48)

Profile of C' line
alternate to Ward's C line

13-3-28
P.9.G
Leach
Simpson

			514.5
	1.55	516.0	
6+32.8 √ B.C.			
6+50		13.5	502.5
+72	E.C.	12.3	503.7
7+00		10.0	506.0
7+50		5.8	510.2
+66.41	B.C.	5.0	511.8
+75		5.2	511.6
8+00		6.7	509.3
+22.15	E.C.	8.4	507.6
+50		11.3	504.7
+56.76	B.C.	12.3	503.7
+65	gully	14.1	501.9

Profile of C' line

13-3-28

		516.0	
8+75		12.2	503.8
9+00		11.0	505.0
+25		12.8	503.8
+50		13.9	502.1
10+00		12.7	503 3
+29.19	B.C	13.5	502.5
+50		14.6	501.4
+75		19.1	496.9
11+00		26.3	489.7
+06		29.5	486.5
+25		26.5	489.5
+50		17.0	499.0

Profile of C' line

continued from page 10

13-3-28

		516.0		
1	E.C		16.5	499.5
11+70			11.7	504.3
12+00			7.6	508.4
+50			5.9	510.1
+80.69	B.C.		2.3	513.7
13+00			1.0	515.0
+25			2.8	513.2
+50			3.5	512.5
+60.97	EC		3.7	512.3
14+00			5.5	510.5
+50			11.8	504.2
			16.00	500.0
		5.3	505.3 ✓	

(51) Profile C' line 13-3-28

		505.3		
15+00			12.0	493.3
+13	gulley		15.7	489.6
+50			7.0	498.3
16+02½	B.C.		1.6	503.7
+25			2.0	503.0
+50			2.7	502.3
+75			5.3	500.0
17+00½	E.C.		10.1	495.2
+18	B.C.		14.3	491.0
+25			15.5	489.8
+36	gulley		18.6	486.7
+50			14.9	490.4

(52)

Profile C' line

505.3

17+75		10.1	495.2
18+00		7.1	498.2
18+25		5.5	499.8
+50		6.4	498.9
+64.33 E.C. 31+00 C line		8.1	497.2 ✓

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(53)

Transit notes of Final Located line for Road across Lower Otay near Upper Otay Dam

11-12-5-28
R.O.G.
Leach
Simpson

N 57° 47' 20" E

6+78.77 E.C. 14°58:30

6+75 14°02.2

6+52.74 P.I. × × Δ = 29°57 Rt
R = 100.0
S.T. = 26.74
L.A. = 52.27

+50 6°52.5'

6+26.00 B.C. 0°00

340.56

N 27° 50' 20" E

3+37.93 E.C. 7°20-10

+25 5°09.3

3+12.47 P.I. × × Δ = 14°40:20 Rt
R = 200.0
S.T. = 25.75
L.A. = 51.21

3+00 1°54.3

2+86.72 B.C. 0°00

N 13° 10' E

0+00 =
0+00 Ward line

(54)

L line

12-5-28
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10+69.54	E.C.	N 7°00	N 70°57'20" E
+50		N 4°12.	
+25		N 0°37.1	
10+00		N 7°02.3	
9+82.95	P.I.		Δ = 54°00 Rt S.T. = 101.90 R. = 200.0 L.A. = 188.49
+75		N 3°27.4	
+50		N 9°52.5	
+25		N 6°17.7	
9+00		N 2°42.86	
8+81.05	B.C.	0°00	

56 203.71

N 16°57'20" E

8+16.46	E.C.	N 20°25	
8+00		N 17°42.1	
7+82.41	P.I.		Δ = 40°50L R = 100.0 S.T. = 37.72 L.A. = 71.22
+75		N 8°32.4	
+50		N 1°22.6	
7+45.19	B.C.	0°00	

130.88

N 57°47'20" E

(55)

L line

12-5-28
P.O.G
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Simpson

S 44° 02' 40" E

16+46.81 P.I. × × Δ = 10° Rt no curve

S 54° 02' 40" E

462.00

10+97.79 P.O.T

12+59.99 E.C. 27° 30
+50 24° 38.2
+25 17° 28.1

12+16.06 P.I. × × Δ = 55° 00 Rt
R = 100.0
T = 52.06
L = 95.99

12+00 10° 18.7

+75 3° 09.1

11+64.00 B.C. 0° 00

N 70° 57' 20" E

218.42

L line

27+00	End of line on old grade				
			457.45	S 9°32'40" E	
25+31	in old Road bed				
22+42.55	P.I.		×	×	Δ = 11°10' Lt
			354.63	S 1°38'40" W	
19+51.08	E.C.	22°50			
+50		22° 37.5			
+25		17°51.0			
19+00		13°04.6			
18+94.69	P.I.		×	×	Δ = 45°40 Rt R = 150.0 ST. = 63.16 LA = 119.55
+75		8°18.1			
+50		3°31.6			
18+31.53	B.C.	0°00			
			217.88	S 44°02'40" E	
16+76.81	P.I.		×	×	Δ = 10° Rt

12-5-78
P.O.G.
Leach
Simpson

(57)

Profile
L line level notes

				498.89	Ward's Rod
	12.90	511.79			+2.90 Grade
27+00			5.9	505.9	
26+50			7.1	504.7	504.6
26+00			8.6	503.2	503.20
+75				502.6	X 503.00
25+50			9.6	502.2	503.775
25+31.5			10.4	501.4	505.72
+2					
25+00			6.9	504.9	506.325
24+50			3.0	508.8	508.875
			0.30	511.49	
	7.88	519.37			
24+00			6.9	512.5	511.425
23+50			4.6	514.8	513.975
+25					X 515.20
23+00			1.8	517.6	516.175
22+88			0.9	518.5	516.46
+75				518.4	516.50
22+50			1.4	518.0	516.50
+25				517.5	516.15

23-5-28
P.O.9
Leach
Simpson

Note old Roadbed only 16' wide

	0.0 9.0	0.0		0.0 9.0
C 2.1 11.05	0.0 6.6	0.0		0.0 9.0
C 2.0 12.0	0.0 6.5	F 0.4 5.0	F 0.4	F 0.4 9.6
C 1.1 11.55	0.0 6.8	F 2.1 2.8	F 1.6	F 2.1 12.15
F 1.9 11.85	F 3.7 0.9	F 4.3 F		F 4.5 15.75
0.0 9.0		F 1.4	F 2.7 5.5	F 6.2 12.6 F 5.6 17.4
C 1.9 11.95		0.0		F 2.8 13.20
C 3.1 12.55		C 1.1	0.0 7.2	F 0.6 9.9
C 3.5 12.75		C 0.8	0.0 5.4	F 0.6 9.9
C 2.8 12.40		C 1.4		C 0.2 11.1
		C 2.0		
C 3.3 11.65		C 1.9		C 0.7 11.35
C 3.0 12.80		C 1.5		C 0.6 11.3
C 1.9 11.95		C 1.1		C 0.4 11.2

L line

519.37

22+00		2.6	516.8	515.125
21+50		5.9	513.5	512.37
21+00		9.3	510.1	509.62
20+50		12.8	506.6	506.87
		12.80	506.57	+3.50
	6.47		513.04	
20+27		7.7	505.3	505.60
20+00		10.5	502.5	504.12
19+85		11.3	501.7	503.3
+75			500.4	502.75
19+51.08		17.1	495.9	
+50			495.5	501.68
19+35	in Wash	22.8	490.2	501.40
19+35 Place 30" Bellmouth culvert 45' long.				100 V.C.
19+25		19.5	493.5	501.255
19+00		15.1	497.9	501.44
18+75		11.6	501.4	502.26875

Grade

23-5-28.
P.O.G
Leach
Simpson

C 1.7 11.85	C 1.7	C 0.8 11.4	
C 1.1 11.55	C 1.1	C 1.6 11.8	
C 1.0 11.50	C 0.6	C 0.5 11.75	
+68	Grade		
0.0 9.0	F 0.3	F 0.3 9.45	
0.0 9.0	F 0.3	0.0 9.0	
F 0.7 10.05	F 1.6	F 1.0 10.5	
F 1.4 11.1	F 1.6	F 0.6 9.45	
F 2.7 13.05	F 2.3	F 1.9 11.7	
F 4.0 15.0	F 3.4	F 2.0 12.0	
F 7.9 20.85	F 11.6	F 9.0 10.8	F 8.0 23.0
F 5.0 16.50	F 7.8	F 11.3 20.3	F 10.0 24.0
F 1.2 10.6	F 3.5	F 7.7 20.55	
C 1.7 11.85	0.0 4.3	F 0.9	F 6.4 18.6

L line

		513.04		Grade
18+50		9.3	503.7	503.40
18+31.53		8.6	504.4	504.24
18+00		6.4	506.6	505.67
17+50		3.7	509.3	507.94
17+00		0.8	512.2	510.21
16+76.81		0.1	512.9	511.26
16+65		0.5	512.5	511.807
16+42		3.2	509.8	512.85
		3.17	509.87	
	3.54	513.41		
16+05		13.3	500.1	514.529
15+95	Place 24" X 65' culvert	14.2	499.2	514.98
15+80		10.1	503.3	515.65
15+50		2.1	511.3	517.01
		0.60	512.81	

-4.5375 %

23-5-28
POG
Leach
Simpson

+53	Grade		
C 3.8 12.9	C 0.3	0.0 0.8	F 4.4 15.6
C 3.4 12.7	C 0.2	0.0 1.3	F 3.4 14.1
C 3.3 12.65	0.0		F 3.8 14.7
C 3.6 12.8	C 1.4		0.0 9.0
C 3.3 12.65	C 2.0		C 1.3 11.65
C 3.2 12.6	C 1.6		C 0.6 11.3
C 1.8 11.9	C 0.7	0.0 9.0	
+60	Grade		
F 2.2 12.3	F 3.0		F 5.5 17.25
F 10.8 25.2	F 14.4		F 19.1 37.65
F 12.1 27.15	F 15.8		F 18.1 36.1
F 14.8 31.4	F 12.4		F 14.5 30.75
F 6.0 18.0	F 5.7		F 6.6 18.9

(60) L line

23-5-28
P.O.G
Leach
Simpson

				512.81	Grade	
	11.79	524.60				
15+12			5.3	519.3	518.74	
14+85			1.9	522.7	519.96	4.53%
			0.62	523.98		
	6.74	530.72				
14+62			4.2	526.5	521.00	
14+50			3.3	527.4	X 521.553	
+25				527.5	522.40	50 l.c.
14+15			2.6	528.1	522.52	
14+00			1.7	529.0	X 522.69	
13+50			2.9	527.8	X 522.69	100%
+25				526.3	522.56	50 l.c.
13+10			5.7	525.0	522.33	
13+00					X 522.19	
12+85			9.0	521.7	521.89	
12+60			13.2	517.5	521.39	+2.0%
12+50			14.9	515.8	521.19	

+15 Grade

C 0.4 11.2 C 0.6 0.0 9.0

C 3.8 12.9 C 2.7 C 1.7 11.85

C 6.3 14.15 C 5.5 C 4.6 13.3

C 6.7 14.35 C 5.8 C 4.8 13.4

C 6.7 14.35 C 5.1 C 3.7 12.85

C 5.6

C 7.6 14.8 C 6.3 C 4.9 13.45

C 6.5 14.25 C 5.1 C 4.0 13.0

C 5.0 13.5 C 3.7 C 2.6 12.3

C 3.8 12.9 C 2.7 C 1.0 11.5

+88 Grade

C 0.6 11.3 0.0 1.5 F 0.2 F 2.1 12.15

F 4.2 15.3 F 3.9 F 3.1 8.6 F 5.8 14.7

FC.0 18.0 FA2 10.2 FA8 3.0 F 5.4 F 7.5 20.25

(61)

L line

Station	Remarks	Rod	Elevation	Grade	Cross-sections
		630.72		Grade	
12+43	Place 30" Bellmouth culvert 40' long	16.3	514.4	521.05	F4.3 / 15.45 · F6.5 / 11.4 · F6.6 · F8.9 / 13.0 · F7.7 / 16.9 · F10.6 / 20.7 · F9.4 / 23.1
12+35		14.9	515.8	520.89	F3.8 / 14.7 · F5.1 · F4.3 / 4.5 · F11.5 / 21.3 · F10.3 / 24.45
12+25		15.0	515.7	520.69	F11.1 / 25.65 · F5.0 · F3.2 / 13.8
12+00		15.3	515.4	+2.0% 520.19	F9.3 / 22.95 · F4.8 · F7.0 / 12.0
11+85		15.2	515.5	519.89	F8.5 / 21.75 · F4.4 · 0.0 / 9.2 · C0.9 / 11.45
11+75		11.3	519.4	519.69	C5.1 / 13.55 · 0.0 / 0.4 · F0.2 · F2.9 / 3.2 · F8.3 / 21.45; +73.5 Grade
11+64		9.0	521.7	519.47	C6.4 / 14.2 · C2.2 · 0.0 / 9.0
11+56		9.0	521.7	519.31	C5.5 / 13.75 · C2.4 · C0.8 / 10.2; +44 Grade
				519.10	
11+35		13.0	517.7	518.89	F1.2
+25		13.3	517.4	518.69	C2.5 / 12.25 · 0.0 / 4.2 · F1.3 · F9.5 / 23.25
11+00		13.5	517.2	50 V.C. 518.05	C3.1 / 12.55 · 0.0 / 3.2 · F0.8 · F10.0 / 24.0
+75				517.15	
10+69.54		14.2	516.7	+4.1375% 516.92	C4.2 / 13.1 · 0.0 / 0.7 · F0.2 · F5.8 / 17.7; +66 Grade
10+50		12.9	517.8	516.11	C6.0 / 14.0 · C1.7 · 0.0 / 5.1 · F3.2 / 13.8
		12.29	518.43		
		5.28	525.44	Wards 525.47	

23-5-28
P.O.G
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(62) L line

			618.43	Grade
	0.32	518.75		
10+25		1.7	517.0	515.08
10+00		3.1	516.6	514.05
9+75		4.9	513.8	513.01
9+50		7.5	511.2	511.98
9+25		8.1	510.6	510.94
9+00		10.7	508.0	509.91
8+97		13.0	505.7	509.79
8+95 Place 12" CMP culvert 30' long				
8+81.25		13.0	505.7	509.12
8+70		13.7	505.0	508.67
8+50		11.5	507.2	507.84
8+16.46		9.8	508.9	506.43
8+00		10.0	508.7	505.77

+4.1375 D/O

C 6.0 14.0 C 1.9 0.0 6.0 F 1.9 11.85

C 5.4 13.7 C 1.5 0.0 4.3 F 2.4 12.6

C 4.3 13.15 C 0.8 0.0 3.0 F 3.3 13.95

9+65 Grade

C 2.5 12.25 0.0 2.1 F 0.8 F 4.8 16.12

C 2.7 12.35 0.0 1.2 F 0.3 F 4.4 15.3 F 6.3 18.45

F 1.7 11.55 F 1.1 3.5 F 1.9 F 4.0 3.5 F 4.5 15.75

F 2.0 12.0 F 4.1 F 4.6 15.9

F 0.9 10.35 F 2.5 9.0 F 3.4 F 3.4 4.0 F 7.1 7.5 F 9.3 22.95

F 0.7 10.05 F 3.7 F 13.7 29.55

C 3.9 12.95 0.0 2.0 F 0.6 F 5.0 16.5

(+38.2 Grade

C 5.3 13.65 C 2.5 0.0 11.0

C 5.6 13.8 C 2.9 C 0.3 11.15

(63)

	518.75			Grade
7+75		9.35	509.4	504.74
7+50		11.4	507.3	503.70
7+35		11.6	507.1	503.08
7+00		14.3	504.4	501.63
6+78.37		15.3	503.4	500.72
6+50		16.2	502.5	499.56
6+35		19.1	499.6	498.94
6+26		23.5	495.2	498.57
+25				498.53
6+20		25.4	493.3	498.30
6+05	W.S 27-5-28			497.8
6+00				497.76
5+75				497.50

4.1375%

50 L.C.

C 6.8 14.4 C 4.7 C 1.7 11.6

C 6.2 14.1 C 3.6 C 1.5 11.75

C 6.0 14.0 C 4.0 C 1.2 11.6

C 5.1 13.55 C 2.8 C 1.6 11.8

C 5.2 13.6 C 2.7 C 0.6 9.3

C 4.6 12.3 C 2.9 0.0 9.0

C 0.8 11.4 C 0.7 0.0 2.3 F 5.5 17.75

F 3.4

F 8.4 21.6 F 5.0 F 6.7 5.7 F 13.6 29.4

F 13.0 28.5 F 8.9 15.0 F 7.0 F 2.0 20.0 F 14.0 30.0

		Elev	Grade 497.50
3+50		487.1	
3+25	W.S.	488.4	
+17	H.W.M.	490.7	
3+00		492.8	
2+50		496.5	
2+00		498.6	
+82.3		499.6	
1+50		498.8	
1+16.46	P.O.T.	496.8	
0+95		494.6	
0+50		497.0	
0+00		497.8	

℄

F 9.4 / 23.1 — F 10.4 — F 11.6 / 26.4

F 7.1

F 6.8

F 3.2 / 13.8 — F 4.7 — F 7.0 / 19.5

C 0.4 / 11.2 — 0.0 / 7.6 — F 1.0 — F 2.7 / 12.3

+36.5 Grade

C 3.2 / 12.6 — C 2.4 / 12.2 — C 1.1 — C 2.1 — C 0.5 / 11.25 — C 0.5 / 11.25

C 2.1 / 12.05 — C 1.3 — C 0.6 / 11.4 — C 0.3 / 11.15

+30.5 Grade

0.0 / 9.0 — F 0.7 — F 2.0 / 12.0

F 1.3 / 10.95 — F 2.9 — F 3.4 / 14.1

C 1.4 / 11.7 — C 0.6 / 6.5 — F 0.5 / 5.0 — F 0.5 — F 0.8 / 7.5 — F 1.0 / 10.5

C 1.6 / 11.0 — C 1.5 / 11.0 — C 0.8 / 6.0 — C 0.2 / 5.0 — C 0.2 — 0.0 / 6.0

(65)

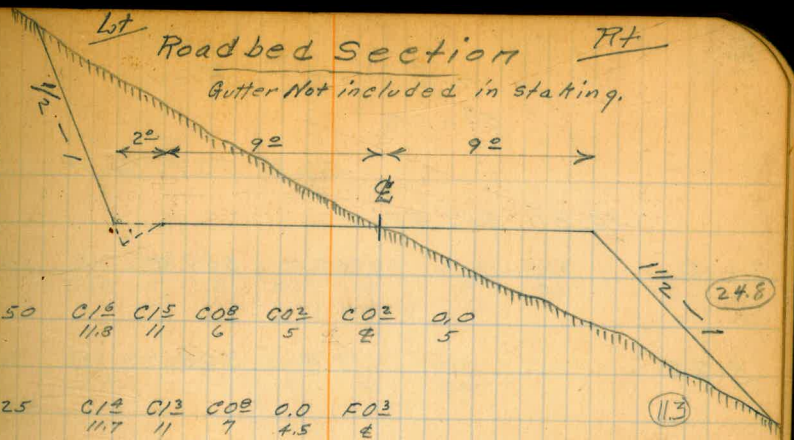
Levels on Upper Otay Road.

+	H.I.	−	Elev.	
BM#1 – 28' Lt. 0+00 = 501.01 B.M.				
	6.77	507.78		
0+00		10.1	497.7	
+50		10.8	497.0	
+95		13.1	494.7	
1+00		12.7	495.1	
+25		10.5	497.3	
+50		8.6	499.2	
+75		7.7	500.1	
2+00		6.2	501.6	
+25		4.3	503.5	
+50		3.7	504.1	
+75		2.5	505.3	
3+00		0.8	507.0	

Roadbed Section

Lt — Rt

Gutter Not included in stating.



497.50	C1.6 11.8	C1.5 11	CO.8 6	CO.2 5	CO.2 ℄	0.0 5	
97.25	C1.4 11.7	C1.3 11	CO.8 7	0.0 4.5	FO.3 ℄		
497.125	+7.5 = 0.0 11 Lt.						
97.2			FO.9 12.4	F2.5 ℄	F3.0 13.5		24'–12"
97.28			FO.6 11.9	F2.2 ℄	F3.0 13.5		
498.00			0.0 11.0	FO.7 ℄			
99.00		C1.2 11.6	C1.1 11	CO.2 ℄	0.0 3.0		15.0
500.00		C1.0 11.5	C1.0 11	CO.1 ℄	0.0 8.0		13.4
01.0		C1.1 11.9	C1.6 11	CO.6 ℄	0.0 7.0		29.8
02.0		C2.2 12.1	C2.2 11	C1.5 ℄	C1.2 9	C1.0 9.5	63.1
03.0		C2.1 12.1	C2.0 11	C1.1 ℄	CO.5 9	CO.5 9.3	50.9
04.0		C2.9 12.5	C2.8 11	C1.3 ℄	0.0 10.0		62.3
05.0		C2.9 12.4	C2.6 11	C2.0 ℄	CO.5 9	CO.5 9.3	76.9

Jan. 26-28

Ward – Inst
Duermit-Rod
McBain-Cly

Sta.	+	H.I.	−	Elev.	
		507.78			
			0.62	507.16	TP
	10.31	517.47			
3+10			10.1	507.4	
+50			9.4	508.1	
4+00			7.0	510.5	
+50			5.9	511.6	
+75			5.6	511.9	
5+00			6.6	510.9	
+15			8.3	509.2	
+25			10.9	506.6	
+30			12.0	505.5	
+37			11.7	505.8	
+50			8.7	508.8	
+75			4.6	512.9	

	℄ Grade	Lt					Rt		
+4.0 %	505.40	$C3^{0}$ / 12.5	$C2^{8}$ / 11	$C2^{7}$ / 8	$C2^{0}$ / 6	$C2^{0}$ / ℄	$C0^{6}$ / 9	$C0^{5}$ / 9.3	
	07.0	$C2^{6}$ / 12.3	$C2^{6}$ / 11	$C2^{0}$ / 7	$C1^{2}$ / 5	$C1^{1}$ / ℄	0.0 / 9.0		
+75 X	508.00								
V.C.	08.81			$C3^{5}$ / 12.8	$C3^{5}$ / 11	$C1^{7}$ / ℄	0.0 / 8.2		
+25 X	509.25								
	09.50			$C5^{6}$ / 13.8	$C4^{5}$ / 11	$C2^{1}$ / ℄	0.0 / 9.5		
+1.0 %	09.75			$C5^{0}$ / 13.5	$C4^{3}$ / 11	$C2^{1}$ / ℄	0.0 / 13.0		
	10.00			$C4^{4}$ / 13.2	$C3^{8}$ / 11	$C0^{9}$ / ℄	0.0 / 4.0		
	10.15		$C1^{8}$ / 11.9	$C1^{5}$ / 11	0.0 / 4.5	$F1^{0}$ / ℄			
X	510.25				0.0 / 11.0	$F3^{7}$ / ℄	$F14^{7}$ / 31.0		
V.C.	10.3					$F4^{8}$ / ℄			40'−18"
	10.4					$F4^{6}$ / ℄			
	10.66				0.0 / 11.0	$F1^{9}$ / ℄	$F7^{5}$ / 20.2		
X	511.42			$C4^{3}$ / 13.2	$C4^{3}$ / 11	$C1^{5}$ / ℄	0.0 / 8.5		

Sta.	+	H.I.	−	Elev.			Grade	Lt	Rt
		517.47							
6+00			1.5	516.0		+3.66%	512.33	$C5^{2}$ 13.6, $C5^{2}$ 11	$C3^{7}$ ℄, $C2^{5}$ 9, $C2^{3}$ 10.2
+15			0.6	516.9			12.8	$C6^{0}$ 14.0, $C5^{3}$ 11	$C4^{1}$ ℄, $C2^{2}$ 9, $C2^{0}$ 10.0
+25			1.0	516.5			13.24	$C5^{7}$ 13.9, $C5^{3}$ 11	$C3^{3}$ ℄, $C1^{7}$ 9, $C1^{6}$ 9.8
+50			1.2	516.3		X	514.17	$C6^{0}$ 14.0, $C5^{4}$ 11	$C2^{1}$ ℄, 0.0 7.0, 0.0 10
			3.42	514.05	T.P.				
	7.61	521.66							
+75			4.8	516.9		100' V.C.	14.78	$C7^{6}$ 14.8, $C7^{2}$ 11, $C4^{6}$ 1	$C2^{1}$ ℄, $C1^{0}$ 2., $C0^{8}$ 9, $C0^{8}$ 9.4
7+00			5.3	516.4			14.79	$C7^{3}$ 14.7, $C6^{0}$ 11, $C4^{6}$ 6	$C1^{6}$ ℄, $C0^{8}$ 9, 0.0 9.2
+20			5.2	516.5			14.2	$C9^{0}$ 15.5, $C8^{3}$ 11, $C6^{0}$ 5	$C2^{3}$ ℄, $C2^{0}$ 9, 0.0 10
+50			5.2	516.5		X	513.00	$C9^{2}$ 15.6, $C8^{0}$ 11, $C6^{8}$ 7, $C4^{0}$ 4	$C3^{5}$ ℄, $C3^{3}$ 8, $C0^{8}$ 9, 0.0 11
8+00			4.0	517.7		-6.0% X	510.00	$C14^{7}$ 18.4, $C12^{4}$ 11, $C9^{8}$ 4	$C7^{7}$ ℄, $C7^{3}$ 7, $C5^{5}$ 9, $C4^{2}$ 11.1
+25			3.6	518.1		100' V.C.	08.69	$C16^{0}$ 19.0, $C14^{0}$ 11, $C12^{0}$ 7, $C9^{9}$ 5	$C9^{4}$ ℄, $C7^{7}$ 5, $C6^{2}$ 9, $C4^{6}$ 11.3
+50			5.7	516.0			07.75	$C10^{8}$ 16.4, $C10^{5}$ 11, $C11^{0}$ 5	$C8^{2}$ ℄, $C3^{2}$ 9, $C2^{4}$ 10.2
+75			12.7	509.0			07.19	$C4^{4}$ 13.2, $C4^{2}$ 11, $C3^{4}$ 5	$C1^{8}$ ℄, 0.0 3.5

(68)

	+	H.I. 521.66	−	Elev.
8+93			17.8	503.9
9+00			19.1	502.6
+05	Top of Rocks		20.9	500.8
+10	Edge Water		31.2	490.5
+13			49.0	472.7
+25			49.0	472.7
			2.88	518.78 BM #2

BM. on Boulder 23' Lt 8+60

12.95	531.73		
		1.39	530.34 TP
11.65	541.99		
		0.32	541.67 TP
11.24	552.91		
		2.79	550.12 TP
9.36	559.48		
		4.74	554.74 Elev.

Elev. = Crest Upper Otay Dam.

1.95	556.69	
	12.53	544.16 TP

100' V.C. X Level Grade - Bridge

Lt		Rt		
07.0	0.0 2.0	F 3' B	0° E	0.0 8.0
507.00				

	+	H.I.	−	Elev.	
				544.16	TP.
	0.43	544.59			
			12.57	532.02	TP
	0.77	532.79			
			12.51	520.28	TP
	1.17	521.45			
			12.17	509.28	TP
	2.52	511.80			
9+40			34.8	477.0	
+45			27.3	484.5	
+48	East Edge Water		21.3	490.5	
+55			10.4	501.4	
+60			10.2	501.6	
+75			7.1	504.7	
10+00			9.8	502.0	
+25			2.3	509.5	
			0.85	510.95	BM #3

BM – Nail in Hub 35' Lt. 10+00

Level Grade

X 507.00

−1.0 %

	Lt			Rt		
507.00				F 5.0 / ℄		
+20 = 0.0 11' Lt.						
06.75	C 3.4 / 12.7	C 3.0 / 11	C 1.0 / 6	C 2.7 / ℄	C 1.3 / 6	0.0 / 10.0

(70)

Jan.-27-28
Ward - Inst.
Dvcrmit - Rod
Mc Bain - Chn.

	+	H.I.	−	Elev.		Grade	Lt			Rt		
				510.95 B.M.								
	7.84	518.79										
10+50			7.2	511.6	0/0	06.50	C11 9 / 16.5	C11.6 / 11	C10 9 / 6	C5 1 / ℄	C2 9 / 7	0.0 / 12.0
+75			4.7	514.1	X	506.25		C12 5 / 17.3	C10 9 / 11	C7 8 / ℄	0.0 / 13.0	
11+00			8.6	510.2	0.1.0.05	06.31	C5 6 / 13.8	C7 8 / 11	C7 7 / 6	C3 9 / ℄	0.0 / 5.0	
+15			17.0	501.8	0.1.0.	06.7	C0 5 / 11.3	C0 3 / 11	0,0 / 10	F4 2 / ℄		
+20			15.2	503.6		06.9		0,0 / 12.0	F4 9 / 4	F3 3 / ℄	0,0 / 8.0	
					+25 X	507.00						
+33			3.7	515.1		07.3		C13 4 / 17.7	C11 6 / 11	C7 8 / ℄	C2 9 / 11	C1 6 / 11.8
+50			3.5	515.3	0/0 + 1.0	08.0		C12 4 / 17.2	C10 5 / 11	C7 3 / ℄	C3 8 / 9	C3 5 / 10.8
12+00			4.4	514.4		10.0	C9 7 / 15.8	C7 8 / 11	C5 8 / 6	C4 4 / ℄	C3 9 / 6	0.0 / 13.0
					+25 X	511.00						
+35			3.2	515.6		11.3	C8 8 / 15.4	C7 3 / 11	C6 2 / 7	C4 3 / ℄	C2 9 / 9	C1 8 / 9.9
+50			3.9	514.9	0.1.0.05	11.70	C9 2 / 15.7	C8 3 / 11	C7 9 / 8	C3 2 / ℄	C1 3 / 9	C1 1 / 9.6
+75			4.2	514.6	X	511.75		C8 6 / 15,3	C7 9 / 11	C2 8 / ℄	0,0 / 6,5	
13+00			5.0	513.8	0/0 + 1.0	11.50	C9 5 / 15.8	C8 9 / 11	C5 5 / 4	C2 3 / ℄	0.0 / 6.5	
+20			3,8	515.0		11.30		C10 9 / 16.0	C8 8 / 11	C3 7 / ℄	0.0 / 9.0	

	+	H.I. 518.79	−	Elev.		Grade	Lt			Rt			
13+50			5.4	513.4		511.00	C8 7 / 15.4	C6 7 / 11	C2 4 / ℄	0.0 / 7.0			
			5.16	513.63	TP								
	6.10	519.73											
+75			8.7	511.0		510.75	C6 0 / 14.0	C4 8 / 11	C0 2 / ℄	0.0 / 0.5			
+85			6.8	512.9		10.7	C7 4 / 14.7	C6 0 / 11	C2 3 / ℄	0.0 / 5.0			
14+00			7.9	511.8		10.81	C4 8 / 13.4	C4 0 / 11	C1 0 / ℄	0.0 / 1.5	F8 3 / 21.5		32'-12"
+25			8.6	511.1		511.50	C4 4 / 13.2	C3 6 / 11	0.0 / 1.5	F0 4 / ℄	F5 0 / 16.5		
+50			6.6	513.1		12.50	C3 4 / 12.7	C3 2 / 11	C0 6 / ℄	0.0 / 2.0			
+75			5.3	514.4		13.50	C3 2 / 12.6	C2 8 / 11	C0 9 / ℄	0.0 / 4.5			
15+00			4.7	515.0		14.50	C2 5 / 12.3	C2 3 / 11	C0 5 / ℄	0.0 / 3.0			
+25			4.0	515.7		515.50	C2 5 / 12.3	C2 2 / 11	C0 2 / ℄	0.0 / 1.5			
+50			2.1	517.6		16.12	C3 4 / 12.7	C3 0 / 11	C1 5 / ℄	0.0 / 10.0			
			4.62	515.11	TP								
	11.16	526.27											
+75			8.9	517.4		516.00	C3 6 / 12.8	C3 2 / 11	C1 4 / ℄	0.0 / 10.0			

	+	H.I.	−	Elev.		Grade	Lt		Rt		
		526.27									
16+00			9.5	516.8		515.50	C3 6 12.8	C3 4 11	C1 3 ℄	0.0 9.0	
+37			9.3	517.0	12.0 %	14.76	C3 8 12.9	C3 5 11	C2 2 ℄	0.0 3.0	
+50			11.8	514.5	X	514.50	C2 4 12.2	C2 0 11	0.0 ℄		
+60			14.3	512.0		14.4	C0 5 11.3	C0 5 11	0.0 5.5	F2 4 ℄	F6 5 18.7	28'-12"
+80			11.0	515.3	100' V.C.	14.1		C3 3 12.7	C3 0 11	C1 2 ℄	0.0 7.0
17+00			10.0	516.3		14.12		C5 2 13.6	C4 7 11	C2 2 ℄	0.0 8.0
+20			11.1	515.2		14.4		C4 0 13.0	C3 5 11	C0 8 ℄	0.0 3.0
+50			9.3	517.0	X	515.00		C6 2 14.1	C5 2 11	C2 0 ℄	0.0 7.0
+85			8.9	517.4	+ 3.0 %	16.05		C6 0 14.0	C4 2 11	C1 3 ℄	0.0 4.5
18+00			8.5	517.8		16.50		C5 8 13.9	C4 0 11	C1 3 ℄	0.0 4.7
			0.80	525.47	BM #4						

BM - Nail in Hub 20' Lt. 18+15.

1.16 526.63

Dec. 20-27
Ward-Notes
Duermit-Lev.
McBain-Rod

+15			8.3	518.3		16.95		C5 4 13.7	C4 5 11	C1 3 ℄	0.0 4.0

	+	H.I. 526.63	−	Elev.		Grade	Lt	Rt	
18+30			8.8	517.8	+3.0%	517.40	C4 9 13.5	C4 2 11	C0 4 ℄ 0.0 1.5
+50			7.8	518.8	X	518.00	C4 6 13.3	C4 2 11	C0 8 ℄ 0.0 1.0
+75			6.3	520.3		18.61	C6 3 14.2	C5 2 11	C1 7 ℄ 0.0 4.5
19+00			5.4	521.2	-1.00 V.C.	18.94	C7 2 14.6	C6 2 11	C2 3 ℄ 0.0 7.0
+30			0.6	526.0		18.9	C10 3 16.3	C9 5 11	C7 1 ℄ C5 8 9 C5 2 11.6
+40			0.3	526.3		18.8	C11 5 16.8	C10 3 11	C7 5 ℄ C4 8 9 C3 6 10.8
+50			2.5	524.1	X	518.75	C10 5 16.3 C9 3 11	C8 2 5	C5 3 ℄ C2 4 9 C2 0 10.0
+75			6.7	519.9		18.38	C5 5 13.8	C4 8 11	C1 5 ℄ 0.0 5.0
20+00			9.7	516.9	-1.50	18.00	C1 0 11.5 C1 2 11	0.0 5.0	F1 L ℄
							+10 = 0.0 11'Lt.		
+20			10.5	516.1	%	17.70		F0 7 12.0	F1 6 ℄
+27			12.2	514.4		17.60		F2 6 14.9	F3 2 ℄ F4 5 15.7 28'—36"
							+40 = 0.0 11'Lt.		
+50			8.1	518.5		17.25	C2 4 12.2	C2 2 11	C1 2 ℄ 0.0 6.0
+75			8.6	518.0		16.88	C3 3 12.7	C3 0 11	C1 L ℄ 0.0 6.0

	+	H.I. 526.63	−	Elev.		Grade	LT				RT
21+00			8.8	517.8		516.50	C3 8 / 12.9	C3 5 / 11	C2 8 / 6	C1 3 / ℄	0.0 / 4.0
+50			9.3	517.3		15.75		C4 4 / 13.2	C3 8 / 11	C1 5 / ℄	0.0 / 10.0
+85			10.2	516.4		15.22		C2 8 / 12.4	C2 7 / 11	C1 2 / ℄	0.0 / 6.0
22+00			10.9	515.7		15.00		C2 2 / 12.1	C2 0 / 11	C0 7 / ℄	0.0 / 4.0
			12.18	514.45 TP	− 1.50 @ 0.5%						
	7.43	521.88									
+25			6.1	515.8		14.62		C2 4 / 12.2	C2 3 / 11	C1 2 / ℄	0.0 / 12.5
+50			6.0	515.9		14.25		C3 0 / 12.5	C2 8 / 11	C1 6 / ℄	C1 0 / 9	C1 0 / 9.5
+75			6.7	515.2	X	513.875		C3 4 / 12.7	C3 0 / 11	C1 3 / ℄	0.0 / 12.0
23+00			8.1	513.8	50' V.C.	13.20		C1 9 / 12.0	C1 7 / 11	C0 6 / ℄	0.0 / 8.0
+25			8.4	513.5	X	512.50		C1 8 / 11.9	C1 7 / 11	C1 0 / ℄	0.0 / 9.0
+50			9.2	512.7	− 1.00 @ 0%	11.50		C2 2 / 12.1	C2 0 / 11	C1 2 / ℄	0.0 / 11.0
+65			10.2	511.7		10.90		C2 6 / 12.3	C2 4 / 11	C0 8 / ℄	0.0 / 5.0
24+00			10.6	511.3		09.50		C4 3 / 13.2	C4 5 / 11	C1 8 / ℄	0.0 / 9.5

	+	H.I.	−	Elev.		Grade	Lt	Rt	
		521.88							
24+25			10.6	511.3	−4.0%	508.50	$C6^{0}$ 14.0; $C5^{9}$ 11	$C2^{8}$ ℄; $C1^{1}$ 9; $C1^{0}$ 9.5	
+50			11.3	510.6	X	507.50	$C6^{0}$ 14.0; $C5^{4}$ 11	$C3^{1}$ ℄; $C1^{2}$ 9; $C1^{0}$ 9.5	
			12.14	509.74 TP					
	4.75	514.49							
+75			6.5	508.0	100' V.C.	1/31/28 Rcop 06.50 ~~07.50~~	$C4^{4}$ 13.2; $C3^{2}$ 12.6; $C3^{8}$ ~~$C2^{8}$~~ 11	$C1^{5}$ ~~$C0^{5}$~~ ℄; ~~0.0 2.0~~; 0.0 6.0	
							+92 = 0.0 11' Lt.		
25+00			11.4	503.1		06.38		$F3^{3}$ ℄	
+17			15.2	499.3		06.4	$F6^{6}$ 20.9	$F7^{1}$ ℄; $F9^{7}$ 23.5	36' — 36"
+25			14.8	499.7		06.47		$F6^{8}$ ℄	
							+45 = 0.0 11' Lt.		
+50			8.3	506.2	X	507.00	$C1^{2}$ 11.6; $C1^{2}$ 11; 0.0 5.0	$F0^{8}$ ℄	
+65			4.4	510.1	+3.0%	07.45	$C3^{4}$ 12.7; $C3^{2}$ 11	$C2^{6}$ ℄; $C1^{5}$ 9; $C1^{3}$ 9.7	
+90			1.7	512.8		08.20	$C5^{9}$ 14.0; $C5^{7}$ 11	$C4^{6}$ ℄; $C4^{0}$ 9; $C3^{7}$ 10.9	
26+00			1.6	512.9	X	508.50	$C6^{4}$ 14.2; $C5^{9}$ 11; $C4^{8}$ 5	$C4^{4}$ ℄; $C3^{6}$ 9; $C3^{5}$ 10.8	
			4.28	510.21 B.M. #5					

BM — Nail in Hub 25' Rt. 26+00

	+	H.I.		
	1.71	511.92		

+	H.I. 511.92	−	Elev.		℄ Grade	Lt		Rt			
26+50		0.3	511.6		509.07	C4 8/13.4	C4 4/11	C2 5/℄	C1 2/9	C1 1/9.6	
27+00		2.3	509.6	X	507.80	C4 1/13.1	C3 8/11	C1 8/℄	0.0/9.0		
+25		2.3	509.6		06.70	C4 8/13.4	C4 7/11	C2 9/℄	0.0/11.0		
+50		3.8	508.1		05.60	C5 1/13.6	C4 7/11	C2 5/℄	0.0/10.5		
+75		3.5	508.4		04.50	C6 7/14.4	C6 2/11	C3 9/℄	C1 6/9	C1 4/9.7	
28+00		4.2	507.7		03.40	C7 6/14.8	C6 8/11	C4 3/℄	C1 6/9	C1 5/9.8	
+25		5.8	506.1		02.30	C7 3/14.7	C6 3/11	C3 8/℄	C1 6/9	C1 4/9.7	
+50		10.2	501.7	X	501.20	C2 8/12.4	C2 7/11	C0 5/℄	0.0/2.0		
+75		15.4	496.5		500.32	+62 = 0.0 11' Lt.		F3 8/℄			
+80		16.8	495.1		500.2			F5 1/℄			
+85		20.0	491.9		99.9		F7 6/22.4	F8 ℄	F9 5/23.2		34'-48" Pipe
+90		20.4	491.5		99.8			F8 3/℄			
29+00		17.0	494.9		499.68			F4 8/℄			

100' V.C.

1.40 %

100' V.C.

	+	H.I.	−	Elev.	
		511.92			
29+25			13.1	498.8	
+50			10.9	501.0	
+75			10.4	501.5	
+90			9.1	502.8	
30+00			8.9	503.0	
+50			10.5	501.4	
+75			12.2	499.7	
			12.65	499.27	TP
	5.38	504.65			
31+00			7.5	497.2	
+35			9.6	501.1	
+50			3.9	500.8	
+75			4.3	500.4	
32+00			4.8	499.9	

100' V.C. + 1.0 %

+25 X 50' V.C. − 2.50 %

	℄ Grade	LT			RT		
		+17 = 0.0 11' Lt.					
	499.42	C1 2 / 11.6	C1 4 / 11	0.0 / 2.5	F0 6 / ℄		
	499.50		C3 2 / 12.6	C2 9 / 11	C1 5 / ℄	0.0 / 11.0	
	99.75		C2 8 / 12.4	C2 6 / 11	C1 7 / ℄	0.0 / 11.5	
	99.90		C3 1 / 12.6	C3 4 / 11	C2 9 / ℄	C2 0 / 9	C1 8 / 9.9
	500.00		C3 2 / 12.6	C3 2 / 11	C3 0 / ℄	C1 7 / 9	C1 6 / 9.8
	500.25						
	00.28		C1 4 / 11.6	C1 4 / 11	C1 4 / ℄	0.0 / 8.0	
	499.88	C2 8 / 12.4	C2 0 / 11	0.0 / 5.5	F0 2 / ℄	0.0 / 3	0.0 / 7
	99.25	C4 7 / 13.4	C4 2 / 11	C2 4 / 6.5	0.0 / 4.0	F2 0 / ℄	
	98.38		C5 5 / 13.8	C4 8 / 11	C3 9 / 4	C2 7 / ℄	0.0 / 3.5
	98.00			C5 2 / 13.6	C4 6 / 11	C2 8 / ℄	0.0 / 11.0
	97.38	C6 4 / 14.1	C5 2 / 11	C3 7 / 6	C3 0 / ℄	C1 7 / 9	C1 7 / 9.9
	96.75		C4 8 / 13.4	C4 4 / 11	C3 1 / ℄	C1 9 / 9	C1 8 / 9.9

+	H.I. 504.65	−	Elev.	
32+25		5.3	499.4	
+50		8.7	496.0	− 2.50 %
+60		9.2	495.5	
+75		11.8	492.9	
33+00		12.4	492.3	X 100' 1.0 %
+50		11.6	493.1	
34+00	End Line In Co. Road.	11.0	493.7	X
+50		10.1	494.6	+ 1.50 %
35+00		9.1	495.6	

5.76 498.89 BM #6

BM - Nail in Hub 24' Lt. 34+00 (Fence Line)

Elev. Lake 15' Rt. 34+00 = 490.5

This checks elevation at Crossing.

℄ Grade	Lt.			Rt		
496.12	C3 6/12.8	C3 6/11	C3 3/℄	C2 4/9	C2 2/10.1	
95.50	C1 6/11.8	C1 5/11	C0 5/℄	0.0/5.5		
95.25	C1 4/11.6	C0 9/11	C0 7/9	C0 2/℄	0.0/1.5	
94.88	C0 6/11.3	C0 6/11	0.0/5.0	F2 2/℄		
494.25	C1 4/11.6	C1 4/11	0.0/7.0	F2 2/℄	F2 5/12.7	
93.50	C1 5/11.8	C1 3/11	0.0/9.0	F0 4/℄	F2 3/12.5	22'-12" Pipe
493.75	C1 5/11.8	C1 2/11	0.0/9.5	0.0/℄	0.0/9.0	

Soundings for alternate crossin

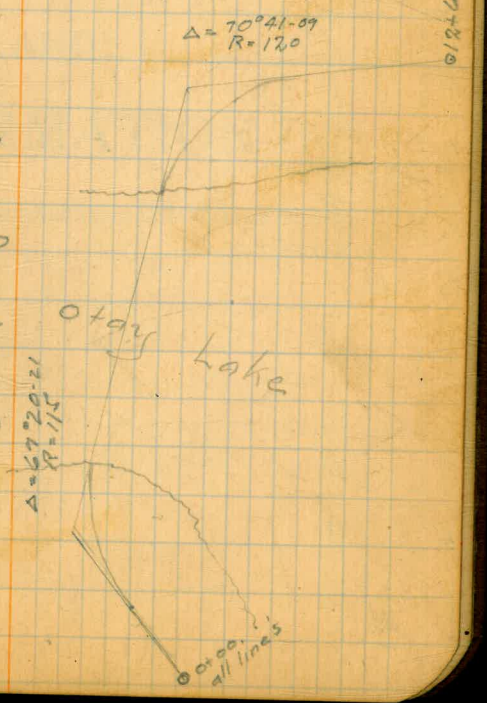
W.S 484.7 May 28-25

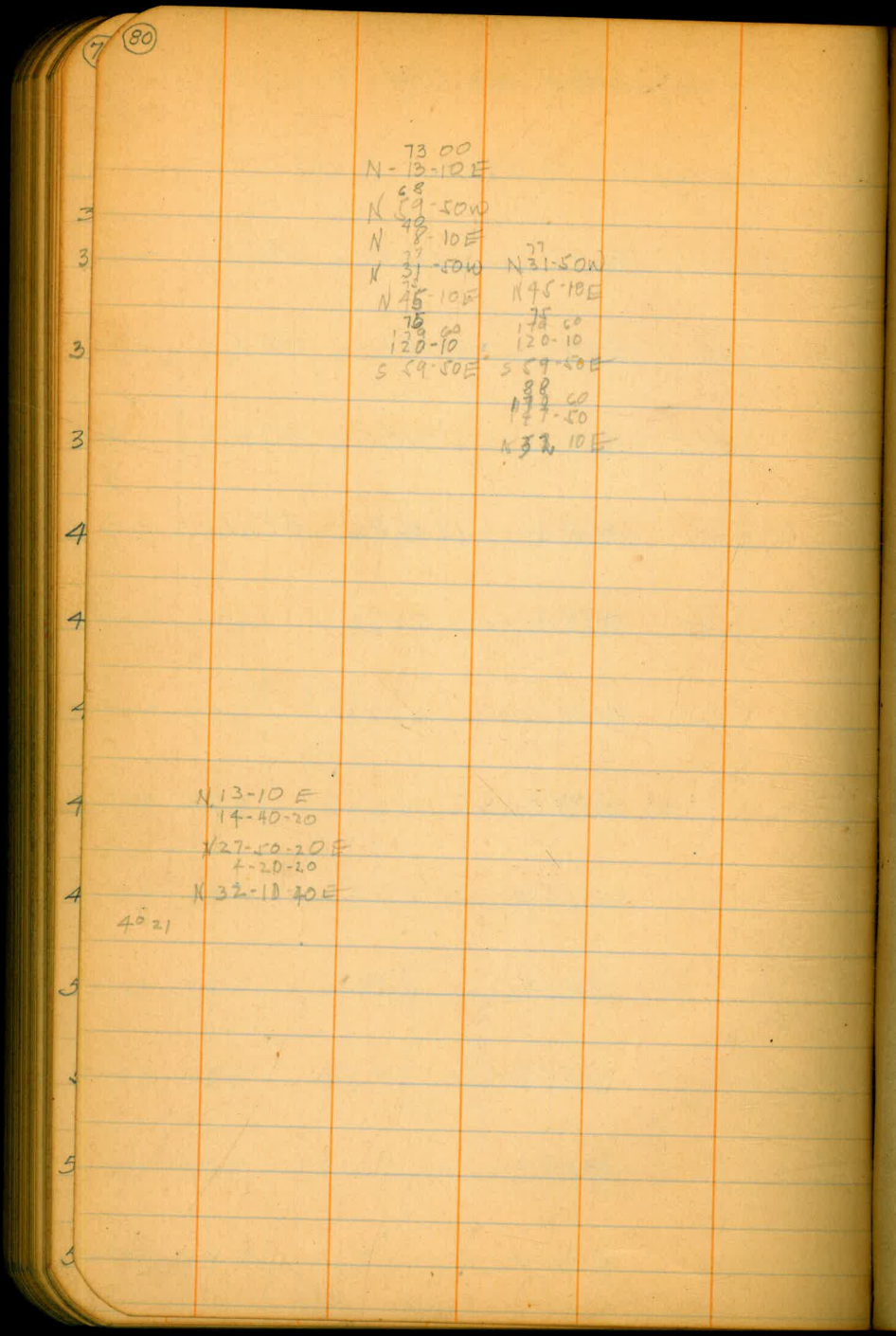
3+40	0.0	484.7			
3+50	3.3	481.4	5+90	17.0	467.7
3+70	5.9	478.8	6+10	16.2	468.5
3+90	11.8	472.9	6+30	15.0	469.7
4+10	13.3	471.4	6+50	15.8	468.9
4+30	17.5	467.2	6+70	15.2	469.5
4+50	17.5	467.2	6+90	14.4	470.3
4+70	18.3	466.4	7+10	14.6	470.1
4+90	19.4	465.3	7+30	14.4	470.3
5+10	15.5	469.2	7+50	14.5	470.2
5+30	15.5	469.2	7+70	14.7	470.0
5+50	15.5	469.2	7+90	15.2	469.5
5+70	17.3	467.4	8+10	14.9	469.8

Shown in Red on Profile

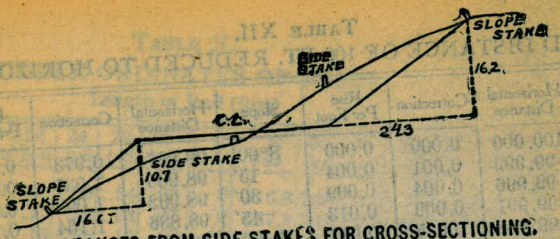
484.7

8+30	15.6	469.1	11+60	495.6
8+50	17.1	467.6	11+80	492.9
8+70	17.2	467.5	12+10	492.2
8+90	16.1	468.6	12+60	493.1
9+10	17.3	467.4		
9+30	2.6	482.1		
9+40	0.0	484.7		
9+50		486.0		
9+90		490.5		
10+00		495.0		
10+50		495.0		
11+00		495.0		





IMPROVED TABLES
AND
INFORMATION



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1 65	1 80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3 45	3.60	3 75	3.90	4.05	4.20	4 35	2
3	4.50	4 65	4.80	4.95	5 10	5 25	5 40	5.55	5.70	5.85	3
4	6.00	6 15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7 50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9 00	9 15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10 65	10.80	10.95	11.10	11.25	11.40	11.55	11 70	11.85	7
8	12.00	12 15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13 50	13 65	13 80	13 95	14.10	14.25	14.40	14 55	14.70	14.85	9
10	15.00	15 15	15 30	15 45	15.60	15.75	15.90	16.05	16.20	16 35	10
11	16 50	16 65	16 80	16.95	17 10	17.25	17.40	17.55	17.70	17.85	11
12	18 00	18.15	18.30	18 45	18.60	18 75	18.90	19.05	19.20	19 35	12
13	19 50	19 65	19.80	19.95	20.10	20.25	20 40	20.55	20.70	20.85	13
14	21.00	21 15	21.30	21.45	21 60	21.75	21.90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24 15	24 30	24 45	24.60	24.75	24 90	25 05	25.20	25.35	16
17	25.50	25 65	25.80	25 95	26.10	26 25	26 40	26.55	26.70	26.85	17
18	27.00	27 15	27.30	27 45	27.60	27.75	27.90	28.05	28 20	28.35	18
19	28 50	28 65	28 80	28.95	29.10	29.25	29 40	29.55	29.70	29.85	19
20	30 00	30 15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31 50	31 65	31.80	31.95	32 10	32 25	32.40	32.55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33.60	33 75	33.90	34.05	34.20	34.35	22
23	34 50	34 65	34.80	34.95	35.10	35 25	35 40	35.55	35.70	35 85	23
24	36 00	36 15	36.30	36 45	36.60	36.75	36.90	37.05	37 20	37.35	24
25	37.50	37.65	37 80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39 00	39 15	39.30	39 45	39 60	39.75	39.90	40.05	40.20	40.35	26
27	40 50	40 65	40 80	40.95	41.10	41.25	41 40	41.55	41.70	41.85	27
28	42 00	42 15	42.30	42.45	42.60	42 75	42.90	43.05	43.20	43.35	28
29	43 50	43 65	43.80	43 95	44.10	44 25	44 40	44.55	44.70	44 85	29
30	45 00	45 15	45.30	45 45	45.60	45.75	45.90	46.05	46 20	46.35	30
31	46.50	46.65	46.80	46 95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48 00	48.15	48.30	48 45	48.60	48 75	48.90	49.05	49 20	49.35	32
33	49.50	49 65	49.80	49.95	50.10	50.25	50.40	50.55	50 70	50.85	33
34	51 00	51.15	51.30	51.45	51.60	51.75	51 90	52.05	52.20	52.35	34
35	52 50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54 00	54 15	54.30	54 45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55 50	55 65	55.80	55 95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57 00	57.15	57 30	57 45	57.60	57 75	57.90	58.05	58.20	58 35	38
39	58 50	58.65	58 80	58 95	59.10	59 25	59.40	59 55	59.70	59.85	39
40	60 00	60 15	60 30	60 45	60 60	60.75	60 90	61.05	61 20	61.35	40
41	61.50	61 65	61 80	61 95	62 10	62 25	62.40	62 55	62 70	62.85	41
42	63 00	63.15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64.35	42
43	64.50	64 65	64 80	64.95	65.10	65 25	65 40	65.55	65.70	65.85	43
44	66 00	66 15	66 30	66.45	66.60	66 75	66.90	67.05	67.20	67.35	44
45	67 50	67 65	67 80	67 95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69 00	69 15	69 30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70 50	70 65	70 80	70 95	71.10	71.25	71 40	71.55	71.70	71.85	47
48	72.00	72 15	72.30	72.45	72.60	72.75	72.90	73 05	73.20	73 35	48
49	73 50	73 65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

2:35 P.M. - Vert 24° 43' - Horiz. 6° 48' Rt
2:41 P.M. - Vert. 23° 59' - Horiz 5° 36' Rt.
January 17 - 1928

1st Sun S 40° 37' 16" W
2nd " S. 41° 43' 00" W

14-41
29-20-30
14 40-45

12
8
4
8