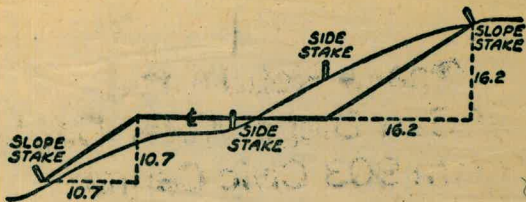


W/

9935

W. H. R. 1901





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

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

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

Please Return to  
City of San Diego Water Dept.  
Room 903 Civic Center  
Balboa Park  
Laurel at Zoo Dr.

514.38  
508.95  
5.43

3-27 = 519.37  
2 228 = 521.62

520.16  
17.97  
39



TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.53	.58	.63	.68
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39
35°	.11	.22	.34	.47	.58	.69	.79	.89	.99	1.04	1.29	1.42	1.54	1.66
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	.39	.79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	.51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4.76	5.31	5.86	6.43	7.01	7.60
120°	.62	1.25	1.93	2.52	3.16	3.81	4.45	5.11	5.77	6.44	7.12	7.80	8.50	9.22

FOR EXTERNALS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	.036	.046	.056	.065	.074	.083	.093	.106	.120	.127	.135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.771	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.885	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

INDEX

CHK. ELEV'S ON ROOF SLAB

1-6 ✓

EARL THOMAS RES. (ROOF SLAB ELEV'S)

20-  
alice

BOTTOM OF ROOF & JOISTS ELEV 30 ✓

ET RES LINE M

38  
alice

TOP OF ROOF ELEV ET RES 39 ✓

LINE M SLY SIDE ONLY

41 ✓

CHECK E. EAST COPING WALL AND ROOF

alice

BUTT A THRU. Z. EARL THOMAS RES.

42-45 ✓

R.P.'S TO MEASURE EXPANSION EAST COPING

WALL BUTT B. THRU. Y

46 ✓

STKS. FOR A.C. ROAD AROUND RES.

49-55 ✓

EXPANSION CHECK M LINE

56 ✓

EARL THOMAS RES. ROOF SLAB ELEV'S

57-74  
alice



ROOF SLAB ELEVS.  
NORTH COPING WALL

WEST,  
WILLIAMS  
KELLASER  
SMITH

COLD & CLOUDY  
2/28/57

T.B.M.	4.24	537.22	532.98	Top F.H.
COPING WALL		5.36 GRADE ROD		
18-19		5.32	531.90	531.86 .04 H
		5.33	531.89	" .03 H
		5.33	531.89	" .03 H
19-20		5.32	531.90	" .04 H
		5.33	531.89	" .03 H
		5.32	531.90	" .04 H
20-21		5.31	531.91	" .05 H
		5.33	531.89	" .03 H
		5.33	531.89	" .03 H
21-22		5.33	531.89	" .03 H
		5.31	531.91	" .05 H
		5.33	531.89	" .03 H
22-23		5.33	531.89	" .03 H
		5.33	531.89	" .03 H
		5.32	531.90	" .04 H
23-24		5.33	531.89	" .03 H
		5.33	531.89	" .03 H
		5.33	531.89	" .03 H
24-25		5.32	531.90	" .04 H

NOTE

Three shots taken  
ON EACH SLAB. (END, MIDDLE  
& END.)



Same Party

2

537.22

2/28/57

24-25 5.34 531.88 531.86 .02 H

5.32 531.90 " .04 H

25-26 5.33 531.89 " .09 H

5.33 531.89 " .03 H

5.34 531.88 " .02 H

CHG. B.M. 4.24 532.98 = 532.98

B.M. 4.24 537.22 532.98

LINE Z 5.27 GRADE ROD.

16-17 5.21 531.95 .06 H

5.17 " .06 H

5.22 " .05 H

17-18 5.22 " .05 H

5.17 " .06 H

5.14 " .13 H

18-19 5.14 " .13 H

5.15 " .08 H

5.18 " .09 H

19-20 5.19 " .08 H

5.19 " .04 H

5.20 " .07 H

20-21 5.19 " .08 H



537.22

2/28/57

20-21	5.16	531.95	.07H
	5.17	"	.10H
21-22	5.19	"	.08H
	5.15	"	.08H
	5.21	"	.06H
22-23	5.20	"	.07H
	5.19	"	.04H
	5.21	"	.06H
23-24	5.22	"	.05H
	5.19	"	.04H
	5.20	"	.07H
24-25	5.20	"	.07H
	5.19	"	.04H
	5.18	"	.09H
25-26	5.19	"	.08H
	5.21	"	.02H
	5.24	"	.03H
LINEY 15-16	5.16 Grandee Road	532.06	.02 L0
	5.18	"	.04 H
	5.08	"	.13H
	5.03	"	



Same party

4

53722

2/28/57

16-17	5.04	532.06	12H
	5.05	"	.07H
	5.06	"	.10H
17-18	5.06	"	.10H
	5.03	"	.09H
	5.09	"	.07H
18-19	5.09	"	.07H
	5.06	"	.06H
	5.08	"	.08H
19-20	5.07	"	.09H
	5.06	"	.06H
	5.09	"	.07H
20-21	5.08	"	.08H
	5.07	"	.05H
	5.09	"	.07H
21-22	5.10	"	.06H
	5.07	"	.05H
	5.14	"	.02H
22-23	5.14	"	.02H
	5.07	"	.05H



Same Party

5

2/28/57

537.22

22-23	5.10	532.06	06H
23-24	5.10	"	06H
	5.07	"	05H
	5.12	"	04H
24-25	5.11	"	05H
	5.09	"	03H
	5.12	"	04H
25-26	5.12	"	04H
	5.05	"	07H
	5.12	"	04H
LINE X	5.07 GRADE ROD		
15-16	5.06	532.15	01H
	5.00	"	03H
	4.96	"	11H
17-18	5.01	"	06H
	4.97	"	06H
	5.01	"	06H
19-20	5.01	"	06H
	4.98	"	05H
	5.00	"	07H
20-21	4.99	"	08H



Same party

6.

537.22

2/28/57

20-21

4.97

532.15

06H

4.99

"

08H

21-22

5.00

"

07H

4.95

"

08H

5.03

"

04H

22-23

5.02

"

05H

4.97

"

06H

5.00

"

07H

23-24

5.01

"

06H

4.98

"

05H

5.02

"

05H

24-25

5.01

"

06H

4.97

"

06H

4.97

"

10H

25-26

4.96

"

11H

4.96

"

07H

5.00

"

07H

chk. B.M.

4.24 532.98 = 532.98

Top FH.



## CHK. FLOOR ELEV'S.

West  
Williams X  
Kellchofee ♀WARM  
7.

4-5-57

BM	4.82	514.75 (GRADE ROD 5.71)	509.93	ON FLOOR (WEST)
10 C		5.72	509.04	
9 C		5.72	"	
8 C		5.72	"	
7 C		5.74	"	
6 C		5.72	"	
5 C		5.79	"	
4 C		5.74	"	
3 C		5.73	"	
3 D		(5.62 GRADE ROD) 5.64	509.13	
4 D		5.60	"	
5 D		5.62	"	
6 D		5.62	"	
7 D		5.62	"	
8 D		5.60	"	
9 D		5.62	"	
10 D		5.61	"	
10 E		(5.53 GRADE ROD) 5.52	509.22	
9 E		5.54	"	



## CHECK FLOOR EL.

8

4/5/57

514.75  
(5.53 Rod)

8E	5.53	509.22
7E	5.53	"
6E	5.54	"
5E	5.54	"
4E	5.54	"
	(5.44 GRADE ROD)	
4F	5.40	509.31
5F	5.40	"
6F	5.42	"
7F	5.42	"
8F	5.40	"
9F	5.41	"
10F	5.40	"
	(5.35 GRADE ROD)	
10G	5.32	509.40
9G	5.34	"
8G	5.31	"
7G	5.33	"
6G	5.33	"
5G	5.31	"
4G	5.30	"



## CHECK FLOOR EL

9.

4/5/57

514.75

(5.35 GRADE ROD)

3 G

5.35

509.40

(5.25 GRADE ROD)

3 H

5.22

509.50

4 H

5.22

"

5 H

5.20

"

6 H

5.23

"

7 H

5.21

"

8 H

5.23

"

9 H

5.21

"

10 H

5.20

"

(5.16 GRADE ROD)

10 I

5.15

509.59

9 I

5.11

"

8 I

5.13

"

7 I

5.13

"

6 I

5.14

"

5 I

5.11

"

4 I

5.13

"

3 I

5.13

"

CHECK  
B.M.

4.82 507.73 = 507.93



## CHECK FLOOR ELEVATIONS

BM.	4.72	514.65	509.93
		(4.97 GRADE ROD)	
10 J		4.89	509.68
9 J		4.93	
8 J		4.94	
7 J		4.91	
6 J		4.95	
5 J		4.92	
4 J		4.92	
3 J		4.89	
		(4.88 GRADE ROD)	
10 K		4.86	509.77
9 K		4.86	
8 K		4.88	
7 K		4.83	
6 K		4.86	
5 K		4.85	
4 K		4.83	
3 K		4.84	
		(4.79 GRADE ROD)	
10 L		4.77	509.86
		4.79 GRADE ROD	
9 L		4.77	

WEST  
WILLIAMS T  
KELLHOFER †

10.

SUNNY

4/8/57

ON FLOOR (WEST)



CHECK FLOOR EL.

	514.65 (4.79 GRADE ROD)	
8 L	4.76	509.86
7 L	4.73	
6 L	4.79	
5 L	4.78	
4 L	4.76	
3 L	4.73	
	(4.70 GRADE ROD)	
3 M	4.73	509.95
4 M	4.67	
5 M	4.68	
6 M	4.67	
7 M	4.67	
8 M	4.66	
9 M	4.69	
10 M	4.69	
CHECK BM	4.72	509.93 = 509.93
BM	4.76	514.70 (5.66 GRADE ROD)
11 C	5.65	509.94
12 C	5.64	
13 C	5.68	

SAME PARTY

11.

4/8/57

ON FLOOR (EAST)



## CHECK FLOOR EL.

	514.70 (5.66 GRADE ROD)	
14 C	5.68	509.04
15 C	5.64	
16 C	5.65	
17 C	5.65	
18 C	5.65	
19 C	5.69	
20 C	5.66	
21 C	5.68	
22 C	5.65	
23 C	5.62	
24 C	5.63	
25 C	5.66	
26 C	5.66	
27 C	5.66	
	(5.57 GRADE ROD)	
27 D	5.58	509.13
26 D	5.56	
25 D	5.54	
24 D	5.58	
23 D	5.54	

SAME PARTY

12.

918157



CHECK

FLOOR EL.

SAME PARTY

13

4/8/57

514.70

5.57 GRADE ROD

22 D	5.54	509.13
21 D	5.56	
20 D	5.56	
19 D	5.56	
18 D	5.53	
17 D	5.56	
16 D	5.53	
15 D	5.51	
14 D	5.56	
13 D	5.57	
12 D	5.55	
11 D	5.55	
	(5.48 GRADE ROD)	
11 E	5.43	509.22
12 E	5.44	
13 E	5.46	
14 E	5.45	
15 E	5.45	
16 E	5.44	
17 E	5.47	



## CHECK FLOOR EL.

SAME PARTY

14.

4/8/57

514.70

(548 GRADE ROD)

18E	5.44	509.22
19E	5.42	
20E	5.41	
21E	5.43	
22E	5.42	
23E	5.43	
24E	5.47	
25E	5.42	
26E	5.45	
27E	5.41	
	(5.39 GRADE ROD)	
27F	5.35	509.31
26F	5.36	
25F	5.40	
24F	5.41	
23F	5.38	
22F	5.35	
21F	5.37	
20F	5.35	
19F	5.37	



## CHECK FLOOR EL.

	514.70 (5.39 GRADE ROD)		
18F	5.38	509.31	
17F	5.36		
16F	5.34		
15F	5.37		
14F	5.39		
13F	5.39		
12F	5.33		
11F	5.36		
CHECK B.M.	4.76	509.94 = 509.94	

## FLOOR ELEV'S.

T.B.M. B LINE	4.44	514.38 (5.43 GRADE ROD)	509.94
3 B		5.39	508.95
4 B		5.38	"
5 B		5.39	"
6 B		5.37	"
7 B		5.39	"
8 B		5.37	"
9 B		5.38	"
10 B		5.40	"

SAME PARTY

15

4/8/57

WEST, WILLIAMS, KELLANDER, &amp; BULL

4-17-57

T.B.M. ON FLOOR OF RESERVOIR



(CONT'D.)

SAME PARTY

16

WARM  
4-17-57

514.38  
(5.43 GRADE ROD)

11B	5.41	508.95
12B	5.38	"
13B	5.40	"
14B	5.38	"
16B	5.39	"
17B	5.39	"
18B	5.37	"
19B	5.42	"
20B	5.40	"
21B	5.42	"
22B	5.40	"
23B	5.39	"
24B	5.44	"
25B	5.43	"
26B	5.41	"
27B	5.41	"
CHK T.B.M.	4.44	509.94 = 509.94



CHK. Footing ELEV. ON SLY. SLOPE

WEST  
WILLIAMS T.  
KELLHOFER  
BULL &

17

WARM  
4-17-57

T.B.M.	10.23	530.16	509.93	T.B.M. ON FLOOR OF RESERVOIR
2 A			+1.46 521.62	521.62
3 A			0.93	519.37
4 A			0.89	"
5 A			0.82	"
6 A			0.86	"
7 A			0.91	"
8 A			0.84	"
9 A			0.84	"
10 A			0.85	"
11 A			0.86	"
12 A			0.83	"
13 A			0.79	"
14 A			0.84	"
15 A			0.83	"
16 A			0.81	"
17 A			0.80	"
18 A			0.84	"
19 A			0.82	"
20 A			0.81	"



SAME PARTY

18

4-11-57

520.16

21A	0.84	519.32	
22A	0.81	"	
23A	0.81	"	
24A	0.83	"	
25A	0.79	"	
26A	0.80	"	
27A	0.80	"	
28A	+1.46	521.62	521.62
Chk. TBM.	10.23	509.93	= 509.93



SOUTH WEST COR. BUTT. COL. A. 1

STK. & GED.

WEST  
WILLIAMS  
KELLHOFER  
BULL

19

MAY 3, 1957

B.M.	4.90	535.21	530.31
S.W. BUTT.	4.96	530.25	531.62
CHK. B.M.	4.90	530.31 = 530.31	

END OF CURB.

F 133



EARL THOMAS RESERVOIR  
ROOF SLAB ELEV'S.

WEST  
WILLIAMS  
KELLHOFER  
BULL

20

MAY 6, 1957

L.B.M.	6.083	537.606	531.523		537.606
				NW 21Y	5516
				NW 22Y	5558
				NW 23Y	5511
				NW 24Y	5535
				NW 25Y	5545
				NW 26Y	5528
				NW 27Y	5501
				NW 28Y	5534
				NE 28X	5389
				SE 27X	5360
				NE 26X	5383
				SE 25X	5368
				SW 24X	5406
				SE 23X	5385
				SE 22X	5404
				NW 21X	5394
				SE 20X	5390
				SE 19X	5395
				SE 18X	5409

CONC. MON. N.E. COR.  
RES.



## ROOF SLAB ELEV'S (CONT.)

SAME  
PARTY

21

MAY 6, 1957

537.606

SW 17X	5409
SE 16X	5381
SE 15X	5450
SE 15W	5305
SW 16W	5314
NW 17W	5314
NW 18W	5298
NW 19W	5307
NW 20W	5307
NW 21W	5301
NE 22W	5307
NW 23W	5295
NW 24W	5294
NW 25W	5296
NW 26W	5296
NW 27W	5328
NW 28W	5320
CHK. BM.	6.088 534.518 = 531.523



R.P.'s To Measure Expansion  
of Roof Slab on Line M

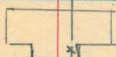
75°F

West  
Williams  
Bull  
Kellhofer


Foggy + Warm


22

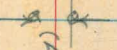
Set 3/10 6/3/57  
25' inside of Fence


  
 (X) in Conc Top Butt block  
 M Air Conc  
 A → 15' betw 28 x 29 M 74°F 89°F

→ ← 6"



  
 Conc  
 80°F Air  
 B → 15' betw 25 x 24 M 74°F



  
 Air Conc  
 C → 15' 21 x 20 M 75°F 81°F


  
 Air Conc  
 D → 15' 15 x 16 M 74°F 92°F

Line (M)

→ ← 6"


  
 (X) in Conc Top butt block  
 M


  
 painted (X) in Cb  
 on Road by Settings  
 10/20



check on Roof Expansion →  
Line M

West  
Williams  
Kellhofer

7:30 to 7:45 AM

23

Cloudy + Cool

Air Temp 60°F 6/7/57

→ ← .005  
→ ← 1.01 63° Conc bay 28+29

→ ← 1.02 63° Conc bay 24+25

← Z →

Line M  
Reference Line

→ ← 1.02' 61° Conc bay 21+20

→ ← 1.02 61° Conc bay 15+16  
→ ← .005



Check on Roof Expansion  
Line M

2:30 to 2:45 PM 24

Clear + Warm

6/7/57

→ \* ← .01  
→ ○ ← 0.989' 103° 78° Cone Temp  
Bay 28 + 29

→ \* ← 0.015  
→ ○ ← 0.983 103° 78° Cone Temp  
Bay 24 + 25

← Z →

Line "M"  
Reference Line

→ \* ← 0.018  
→ ○ ← 0.980 103° 78° Cone Temp  
Bay 20 + 21

→ \* ← 0.025  
→ ○ ← 0.998 103° 77° Cone Temp  
Bay 15 + 16



CHECK ON ROOF EXPANSION  
LINE M.

WEST  
WILLIAMS  
KELLHOFFER  
BULL

25  
CLEAR & HOT

JUNE 18, 1957

Cone 127°

→ 0.97<sup>4</sup><sub><.005</sub>

bay 28+29

→ .96<sup>8</sup><sub><.015</sub>

Cone 127°

bay 24+25

→ .95 ←

Cone 125°

bay 20+21

→ .963<sup>8</sup><sub><.005</sub>

Cone 124°

bay 15+16



CHECK FOR EXPANSION  
REFERENCE LINES ON NORTH AND  
SOUTH COPING WALLS.

WEST,  
WILLIAMS  
KELLHOFER

ALVARADO  
FILTRATION  
PLANT  
BLUE KEEL  
SIGHT

CONC. TEMP 128°

JUNE 20, 1957

0 SET 1" IP  
SEPT 13, 60 @AW

0 1/2" STEEL PIN

REF. PIN DESTROYED  
OCT. 1957, SEE P. 77

SEE ABOVE  
CON

19  
21  
24  
26

~~0 SET 1" IP~~  
SET 3/4" IP  
SEPT 13, 60 @AW

KIOWA DRIVE

28/3

98/10

158/13

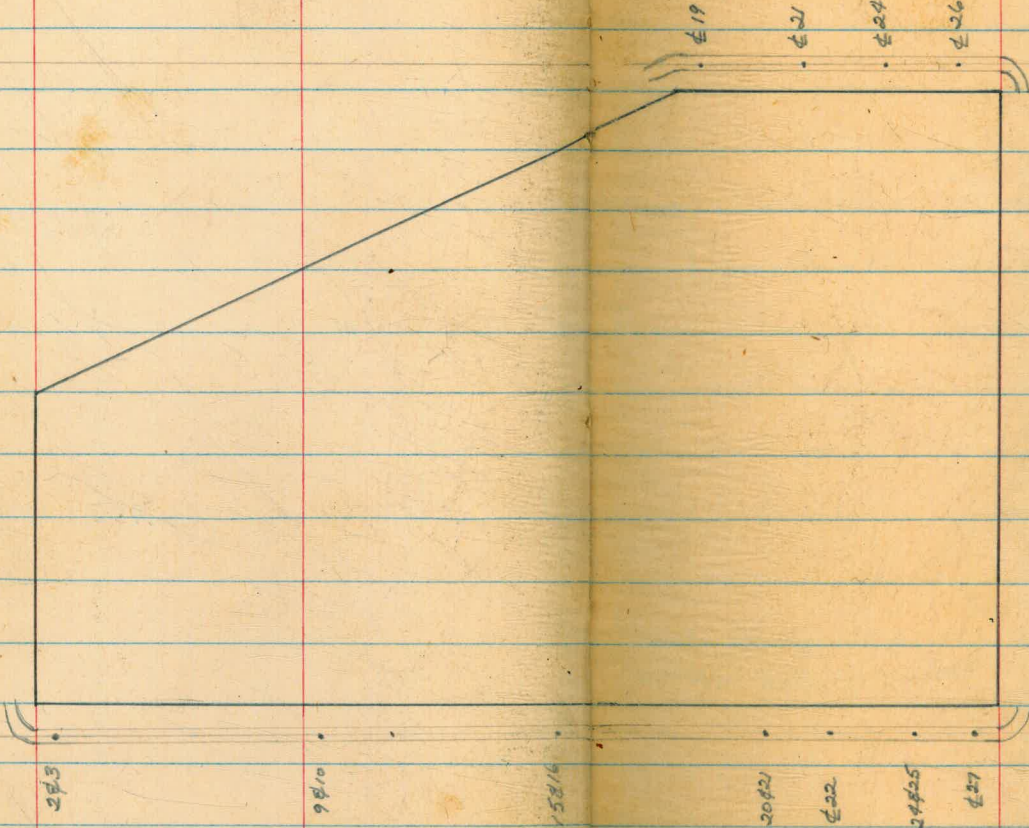
208/21

22

248/25

27

0 1/2" STEEL PIN





CHECK ON ROOF EXPANSION  
LINE "M"

could detect no movement on  
 coping walls as run page 26

West  
Williams  
Kellhofer  
Bull

27

8:30 to 9:00 AM

Clear Warming

6-24-57

Cone 80'

bay 27+28

1.00' → √ .01'

Cone 76'

bay 24+25

1.05' → √ .01'

Cone 76'

bay 20+21

1.025' → √

line

Reference

1.01' → √ .02'





Check Roof Expansion Et

could detect no movement  
on Nly coping wall Conc Temp 108°

could detect no movement  
on Sly Coping wall Conc Temp 108°

West  
Williams  
Kellhofer

3:30 PM 28

7/1/57

→ x .01' Conc 114°  
← .99' bay 28+29

→ x ~~.015~~ Conc 114°  
← .985' bay 24+25

← Z →

Line

→ x .018 Conc 114°  
← .98' bay 20+21

Reference

→ x .01' Conc 114°  
← .98' bay 15+16



Check on Roof Expansion E.T.

Could detect no movement  
in north coping wall Cone Temp 116°

Could detect no movement  
in sly coping wall Cone Temp 116°

West  
Williams  
Kellhofer

29

3:30 PM

7/3/57

Cone 116°

← .98 bay 28 + 29

Cone 116°

← .965 bay 24 + 25

Cone 116°

← .955 bay 20 + 21

Cone 116°

← .95 bay 15 + 16

← .01

Line  
Reference



LINE M  
BOTTOM ROOF & JOISTS ELEV.

WEST  
KELLHOFER  
BULL

30

Ely Side Line M only

July 9, 1957

BM.	6.17	516.11	509.94
			.35 a.R.
COL 15			+15.24 531.18
J #2			+16.22 532.33
BOTT. ROOF			+16.90 533.01
J #3			+16.22 532.33
J #4			+16.23 532.34
BOTT. ROOF			+16.91 533.02
J #5			+16.22 532.33
J #6			+16.19 532.30
J #7			+16.18 532.29
J #8			+16.19 532.30
BOTT. ROOF			+16.88 532.99
COL 16			+15.28 531.39
			+15.27 531.38
BOTT. ROOF			+16.86 532.97
J #1			+16.17 532.28
J #2			+16.19 532.30
J #3			+16.22 532.33
J #4			+16.25 532.36
BOTT. ROOF			+16.91 533.02

TBM. FLOOR OF RESERVOIR

Ely. BOTT. GIRDER

Wly BOTT. GIRDER

Ely. " "



WEST  
KELLHOFFER  
BULL

31

July 9, 1957

516.11  
J #5 +16.18 532.29 ✓

J #6 +16.20 532.31 ✓

J #7 +16.19 532.30 ✓

#8 +16.20 532.31 ✓

BOTT. ROOF +16.88 532.99 ✓

Col 17 +15.28 531.39 ✓

+15.29 531.40 ✓

BOTT. ROOF +16.84 532.95 ✓

#1 +16.17 532.28 ✓

#2 +16.20 532.31 ✓

#3 +16.22 532.33 ✓

#4 +16.23 532.34 ✓

BOTT. ROOF +16.90 533.01 ✓

#5 +16.25 532.36 ✓

#6 +16.26 532.37 ✓

#7 +16.21 532.32 ✓

#8 +16.18 532.29 ✓

BOTT. ROOF +16.84 532.95 ✓

Col 18 15.20 531.31 ✓

15.20 531.31 ✓

WLY. BOTT. GIRDER

Ely. " "

WLY. BOTT. GIRDER

Ely. " "



Col # 18 Cont 516.11

J #1	+16.17	532.28 ✓	
J #2	+16.18	532.29 ✓	
J #3	+16.18	532.29 ✓	
J #4	+16.18	532.29 ✓	
BOTT ROOF	16.86	532.97 ✓	
J #5	16.15	532.26 ✓	
J #6	16.20	532.31 ✓	
J #7	16.18	532.29 ✓	
J #8	16.19	532.30 ✓	
BOTT ROOF	16.89	533.00 ✓	
6.17	516.11 ✓	6.17	509.94 = 509.94 ✓

Col # 19

	15.22	531.33 ✓	
	15.23	531.34 ✓	
J #1	16.21	532.32 ✓	
BOTT ROOF	16.91	533.02 ✓	
J #2	16.21	532.32 ✓	
J #3	16.25	532.36 ✓	
J #4	16.24	532.35 ✓	
BOTT ROOF	16.92	533.03 ✓	

BOTT WLY GIRDER

BOTT FLY "



West  
Kellhofer  
Bull

33

514.11

7/10/57

J #5 16.23 532.34 ✓

J #6 16.23 532.34 ✓

J #7 16.20 532.31 ✓

J #8 16.18 532.29 ✓

COL 20 15.25 531.36 ✓

BOTT Wly Girder

15.25 531.36 ✓

BOTT Ely "

BOTT ROOF 16.84 532.95 ✓

J #1 16.17 532.28 ✓

J #2 16.20 532.31 ✓

J #3 16.18 532.29 ✓

J #4 16.19 532.30 ✓

BOTT ROOF 16.88 532.99 ✓

J #5 16.20 532.31 ✓

J #6 16.20 532.31 ✓

J #7 16.18 532.29 ✓

J #8 16.16 532.27 ✓

COL 21 15.23 531.34 ✓

BOTT Wly Girder

has strut on Ely side

BOTT Ely "

BOTT ROOF 16.85 532.96 ✓



516.11

J #1	16.20	532.31	✓	
J #2	16.17	532.28	✓	
J #3	16.22	532.33	✓	
J #4	16.26	532.37	✓	
BOTT ROOF	16.91	533.02	✓	
J #5	16.26	532.37	✓	
J #6	16.24	532.35	✓	
J #7	16.22	532.33	✓	
J #8	16.21	532.32	✓	
COL 22	15.24	531.35	✓	BOTT OF Wly Girder
	15.23	531.34	✓	BOTT Ely "
BOTT ROOF	16.87	532.98	✓	
J #1	16.21	532.32	✓	
J #2	16.21	532.32	✓	
J #3	16.21	532.32	✓	
J #4	16.22	532.33	✓	
BOTT ROOF	16.88	532.99	✓	
J #5	16.21	532.32	✓	
J #6	16.21	532.32	✓	



516.11

J #7	16.20	532.31	✓
J #8	16.21	532.32	✓
COL 23	15.22	531.33	✓
	15.22	531.33	✓
BOTT ROOF	16.91	533.02	✓
J #1	16.21	532.32	✓
J #2	16.21	532.32	✓
J #3	16.20	532.31	✓
J #4	16.22	532.33	✓
BOTT ROOF	16.90	533.01	✓
J #5	16.19	532.31	✓
		.30 A.R	
J #6	16.21	532.32	✓
J #7	16.18	532.29	✓
J #8	16.16	532.27	✓
5.11	515.05	6.17	509.94 = 509.94
TP	9.69	519.63	5.11 509.94
COL 24	11.72	531.35	✓
	11.73	531.36	✓
BOTT ROOF	13.33	532.96	

BOTT wly Girder

" Ely "

BOTT wly Girder

" Ely Girder



519.63

J #1	12.71	532.24 ✓
J #2	12.63	532.26 ✓
J #3	12.68	532.31 ✓
J #4	12.67	532.30 ✓
BOTT ROOF	13.35	532.98 ✓
J #5	12.67	532.36 ✓
J #6	12.67	532.30 ✓
J #7	12.69	532.32 ✓
J #8	12.65	532.28 ✓
COL 25	11.72	531.35 ✓
	11.71	531.34 ✓
BOTT ROOF	13.34	532.97 ✓
J #1	12.64	532.27 ✓
J #2	12.66	532.29 ✓
J #3	12.66	532.29 ✓
J #4	12.66	532.29 ✓
BOTT ROOF	13.33	532.96 ✓
J #5	12.65	532.28 ✓
J #6	12.61	532.24 ✓

BOTT Wly Binder

" Fly "

519.63

J #7 12.65 532.27<sup>28</sup>J #8 12.65 532.27<sup>28</sup>

COL 26 11.72 531.35 ✓

BOTT WLY Girder

STRUT on Fly Side

BOTT ROOF 13.32 532.95 ✓

J #1 12.66 532.29 ✓

J #2 12.68 532.31 ✓

J #3 12.70 532.33 ✓

J #4 12.69 532.32 ✓

BOTT ROOF 13.32 533.01 ✓

J #5 12.69 532.32 ✓

J #6 12.69 532.27 ✓

J #7 12.69 532.32 ✓

J #8 12.70 532.33 ✓

COL 27 11.76 531.39 ✓

BOTT WLY Girder

11.75 531.38 ✓

" Fly Girder

BOTT ROOF 13.32 532.95 ✓

J #1 12.65 532.28 ✓

J #2 12.62 532.25 ✓

J #3 12.62 532.25 ✓



519.63

J # 4	12.58	532.21	22
BOTT ROOF	13.26	532.89	✓
J # 5	12.64	532.27	✓
JP	12.39	529.69	2.33 517.30 ✓
J # 6	2.53	532.22	✓
J # 7	2.50	532.19	✓
J # 8	2.50	532.19	✓
COL 28	1.50	531.19	✓
	1.54	531.23	✓
BOTT ROOF	2.18	532.87	✓
J # 1	2.51	532.20	✓
J # 2	2.50	532.19	✓
J # 3	2.51	532.20	✓
J # 4	2.52	532.21	✓
BOTT ROOF	3.19	532.88	✓
J # 5	2.52	532.21	✓
J # 6	2.51	532.20	✓
J # 7	2.51	532.20	✓
J # 8	2.52	532.21	✓
BOTT ROOF	3.18	532.87	✓

BOTT Wly Girder

" Fly Girder



ELEV TOP OF ROOF SLAB

LINE M SLY Side

Bay 15 to 29

529.69

1.20 518.50 1239 517.30

8.56 509.94 = 509.94

6.81 538.33

531.523

NE Cone Man

001 15	5.06	533.27	26
Q 15+16	5.09	533.24	22
Wly 16	5.10	533.23	24
Ely 16	5.10	533.23	24
Q 16+17	5.09	533.24	22
Wly 17	5.09	533.24	25
Ely 17	5.10	533.23	24
Q 17+18	5.11	533.22	21
Wly 18	5.11	533.22	27
Ely 18	5.11	533.22	27
Q 18+19	5.12	533.21	24
Wly 19	5.10	533.23	23
Ely 19	5.10	533.23	23
Q 19+20	5.09	533.21	21

518.50

509.94

8.56



538.33

Wly 20	5.09	533.24 ✓
ELY 20	5.08	533.25 ✓
Q 20-21	5.10	533.23 ✓
Wly 21	5.11	533.22 ✓
ELY 21	5.13	533.20 ✓
Q 21-22	5.12	533.21 ✓
Wly 22	5.06	533.27 ✓
ELY 22	5.07	533.26 ✓
Q 22-23	5.09	533.24 ✓
Wly 23	5.08	533.25 ✓
ELY 23	5.06	533.27 ✓
Q 23-24	5.11	533.22 ✓
Wly 24	5.09	533.24 ✓
ELY 24	5.10	533.23 ✓
Q 24+25	5.10	533.23 ✓
Wly 25	5.11	533.22 ✓
ELY 25	5.12	533.21 ✓
Q 25-26	5.11	533.19 ✓
Wly 26	5.13	533.20 ✓
ELY 26	5.14	533.19 ✓

538.33

Q 26-27

5.14 533.19 ✓

Wly 27

5.10 533.23 ✓

Fly 27

5.11 533.22 ✓

Q 27-28

5.18 533.15 ✓

Wly 28

5.23 533.10 ✓

Fly 28

5.22 533.11 ✓

Q 28-29

5.25 533.08 ✓

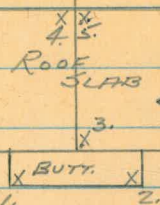
29 End of Root

5.23 533.10 ✓

6.81 531.52 ✓ = 531.52



CHECK ELEV5.  
EAST COPING WALL AND ROOF  
BUTT A THRU. Z



NOTE: SHOTS TAKEN  
IN THIS ORDER

WILLIAMS X  
KELLHOFER  
SPINAZZOLA †

7:30 A.M. PARTLY CLOUDY

AUGUST 9, 1957

→ CIRCLE OF YELLOW PAINT ON EACH STA.  
FOLLOWING THIS PATTERN

BM.	12937	534.259	521.322
Butt. A 1)	Plan 31.62		2.685 31.574 ✓
2)			2.643 31.616 ✓
3)	31.95		2.259 32.000 ✓
4)			2.253 32.006
5)			2.240 32.019 ✓
Butt. B 1)	31.73		2.494 31.765
2)			2.493 31.766
3)	32.06		2.133 32.126
4)			2.102 32.157
5)			2.105 32.154
Butt. C 1)	31.82		2.414 31.845
2)			2.400 31.859
3)	32.15		2.049 32.210
4)			2.030 32.229
5)			2.035 32.224

B.M. S.E. COR. RES.



E. E. COPING WALL  
AND ROOF CONT.

	Plan	H1 534.259		
BUTT D 1)	31.91		2328	31,931
2)			2320	31,939
3)	32.24		1940	32,319
4)			2004	32,255
5)			1991	32,268
BUTT E 1)	32.00		2260	31,999
2)			2251	32,008
3)	32.33		1866	32,393
4)			1905	32,354
5)			1927	32,332
BUTT F 1)	32.09		2,218	32,041
2)			2,212	32,047
3)	32.42		1,867	32,392
4)			1,802	32,457
5)			1,808	32,451
BUTT G 1)	32.19		2,108	32,151
2)			2,099	32,160
3)	32.52		1,737	32,522
4)			1,723	32,536
5)			1,698	32,561

SAME PARTY

43

	H1 534.259			AUGUST 9, 1957
BUTT H 1)	32.28	2,003		32,256
2)		2,018		32,241
3)	32.61	1,658		32,601
4)		1,588		32,671
5)		1,591		32,668
BUTT I 1)	32.37	1,915		32,344
2)		1,922		32,337
3)	32.70	1,561		32,698
4)		1,519		32,740
5)		1,525		32,734
T.P. 2.303	535.042	1,520		532,739
BUTT J 1)	32.46	2,605		32,437
2)		2,610		32,432
3)	32.79	2,250		32,792
4)		2,206		32,836
5)		2,200		32,842
BUTT K 1)	32.55	2,498		32,544
2)		2,487		32,555
3)	32.88	2,136		32,906
4)		2,161		32,881
5)		2,162		32,880



EL. E. COPING WALL  
AND ROOF CONT

	Plan 535.042		
BUTT L ①	32.64	2.412	32.630
2)		2.408	32.634
3)	32.97	2.070	32.972
4)		1.924	33.118
5)		1.935	33.107
BUTT M ①	32.74	2.297	32.745
2)		2.288	32.754
3)	33.07	1.894	33.148
4)		1.922	33.120
5)		1.922	33.120
BUTT N ①	32.74	2.298	32.744
2)		2.289	32.753
3)	33.07	1.939	33.103
4)		1.893	33.149
5)		1.894	33.148
BUTT O ①	32.64	2.418	32.624
2)		2.414	32.628
3)	32.97	2.057	32.985
4)		2.033	33.009
5)		2.052	32.990

SAME PARTY

44.

SUNNY 9:00 A.M.

8/9/57

	Plan 535.042		
T.P.	2.689	535.204	2.527 532.515
BUTT P ①	32.55	2.668	32.536
2)		2.660	32.544
3)	32.88	2.310	32.894
4)		2.231	32.973
5)		2.221	32.983
BUTT Q ①	32.46	2.739	32.465
2)		2.731	32.473
3)	32.79	2.370	32.834
4)		2.320	32.884
5)		2.334	32.870
BUTT R ①	32.37	2.840	32.364
2)		2.824	32.380
3)	32.70	2.467	32.737
4)		2.467	32.737
5)		2.468	32.736
BUTT S ①	32.28	2.930	32.274
2)		2.928	32.276
3)	32.61	2.583	32.621
4)		2.502	32.702
5)		2.493	32.711



EL. E. COPING WALL  
AND ROOF CONT

SAME PARTY

45.

SUNNY 10:00 A.M.

8/9/57

	Plan 535.204	HI	
BUTT T @	32.19	2.984	32.220
2)		2.991	32.213
3)	32.52	2.646	32.558
4)		2.574	32.630
5)		2.593	32.611
BUTT U @	32.09	3.091	32.113
2)		3.083	32.121
3)	32.42	2.717	32.487
4)	32.42	2.711	32.493
5)		2.709	32.495
BUTT V @	32.00	3.162	32.042
2)		3.163	32.041
3)	32.33	2.813	32.391
4)	32.33	2.761	32.443
5)		2.761	32.443
BUTT W @	31.91	3.260	31.944
2)		3.256	31.948
3)	32.24	2.905	32.299
4)		2.874	32.330
5)		2.884	32.320

	Plan 535.204	HI	
BUTT X @	31.82	3.311	31.893
2)		3.311	31.893
3)	32.15	2.970	32.234
4)		2.935	32.269
5)		2.949	32.255
BUTT Y @	31.73	3.416	31.788
2)		3.415	31.789
3)	32.06	3.033	32.171
4)		3.084	32.120
5)		3.090	32.114
BUTT Z @	31.62	3.490	31.714
2)		3.508	31.696
3)	31.95	3.129	32.075
4)		3.162	32.042
5)		3.169	32.035
CHECK TBM		3.677	531.527 = 531.523 N. E. MON.



R.P.S TO MEASURE EXPANSION  
EAST COPING WALL BUTT. B. THRU. Y

12:00 NOON AIR TEMP. 82° F

CON. TEMP. 90° F.

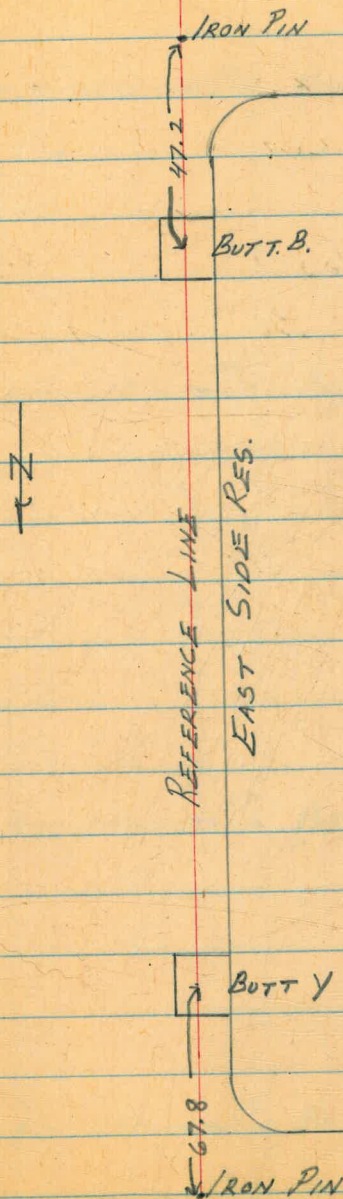
BUTT. B. THRU. Y HAS + CIRCLED WITH  
YELLOW PAINT

T	01
S	01
R	01
N	02
L	02
K	02
J	025
H	03
G	02
F	03
E	03
D	03
C	035
B	04

WILLIAMS  
KELLHOFFER  
SPINAZZOLA

46.

8/19/57





CHECK ON ROOF EXPANSION  
LINE M.

WILLIAMS  
KELLHOFER  
SPINAZZOLA

8/8/57

47

← 0.99 → .04 BAY 28 CON. TEMP. 70°

← 1.00 → .05 BAY 25 CON. TEMP. 70°

REFERENCE LINE

← 1.00 → .07 BAY 20 CON. TEMP. 70°

← 0.97 → .09 BAY 15 CON. TEMP. 70°

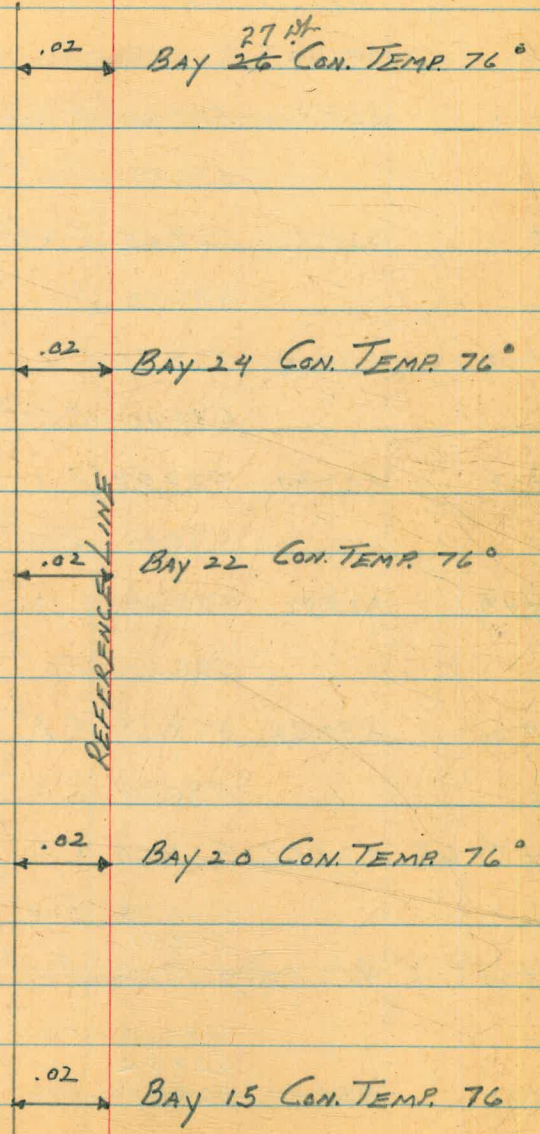


EXPANSION CHECK SO. COPING  
WALL

WILLIAMS  
KELLHOFFER  
SPINAZZOLA

8/8/57  
48.

NOTE: COULD DETECT NO MOVEMENT  
ON NO. COPING WALL. CON. TEMP. 76°





EARL THOMAS RES.

STKS. FOR A.C. ROAD AROUND RES.  
(USED SELF READING ROD)

FILL OR  
CUT

STA.	EL.	GR.	CUT
B.M.	531.52		
0+00	529.76	529.80	FO $\frac{4}{24}$ TO GUTTER (3)
		530.00	FO $\frac{24}{24}$ TO EDGE RD. (5)
0+50	529.76	529.66	CO $\frac{10}{24}$ TO GUTTER (3)
		530.00	FO $\frac{24}{49}$ TO EDGE RD. (5)
1+00	530.08	529.51	CO $\frac{49}{00}$ TO GUTTER (3)
		530.00	CO $\frac{00}{03}$ TO EDGE RD. (5)
1+50	529.40	529.37	CO $\frac{03}{60}$ TO GUTTER (3)
		530.00	FO $\frac{60}{68}$ TO EDGE RD. (5)
1+95	529.92	529.24	CO $\frac{68}{08}$ TO GUTTER (3)
		530.00	FO $\frac{08}{26}$ TO EDGE RD. (5)
2+50	530.34	529.08	C1 $\frac{26}{34}$ TO GUTTER (3)
		530.00	CO $\frac{34}{57}$ TO EDGE RD. (5)
2+78.65	529.57	529.00	CO $\frac{57}{43}$ TO GUTTER (3)
		530.00	FO $\frac{43}{07}$ TO EDGE RD. (5)
0+50	529.59	529.66	FO $\frac{07}{12}$ TO GUTTER (3)
		530.00	FO $\frac{12}{41}$ TO EDGE RD. (5)
1+00	530.04	529.51	CO $\frac{41}{53}$ TO GUTTER (3)
		529.62	CO $\frac{53}{04}$ TO GUTTER (3)
		530.00	CO $\frac{04}{04}$ TO EDGE RD. (5)

WEST X  
WILLIAMS  
COURTNEY 1

10/22/57  
SUNNY

(49)

CON. MON. N.E. COR. RES. F.B. 927-25

EAST SIDE RES. GOING NORTH

SEE PAGE 50 RE. CHANGES

EAST SIDE RES. GOING SO. AND W. TO SO. SIDE RES.



STKS. FOR A.C. ROAD CONT.

SAME PARTY

50

81  
46  
38

10/22/57

STA	STA.	EL.	GR.	COT OR FILL	CO	12
B.1	1450	529.65	529.53	28	CO	12
			<del>529.37</del>	CO	To GUTTER	③
O+0			530.00	FO	To EDGE RD.	⑤
	B.C.		529.52	23	CO	27
	1454.35	529.59	<del>529.36</del>	CO	To GUTTER	③
O+			530.00	FO	To EDGE RD.	⑤
			529.48	45	CO	25
	1480.45	529.73	<del>529.28</del>	CO	To GUTTER	③
1+			530.00	FO	To EDGE RD.	⑤
			529.43	47	CO	25
	1406.55	529.68	<del>529.21</del>	CO	To GUTTER	③
1+			530.00	FO	To EDGE RD.	⑤
			529.38	49	CO	24
	E.C.	2432.65	529.73	CO	To GUTTER	③
1+			530.00	FO	To EDGE RD.	⑤
			529.08	38		
	2750				To GUTTER	③
2+			530.00		To EDGE RD.	⑤
			529.30	42	CO	12
	2481.89	529.42	<del>529.00</del>	CO	To GUTTER	③
2+			530.00	FO	To EDGE RD.	⑤
				58		
	T.P.	<u>529.30</u>				
			529.35	51	CO	25
O+	2450	529.60	<del>529.09</del>	CO	To GUTTER	③
			530.00	FO	To EDGE RD.	⑤
			529.44	40		
				24	CO	21
1+	2400	529.45	<del>529.23</del>	CO	To GUTTER	③
			530.00	FO	To EDGE RD.	⑤
				55		

529.69

529.99

529.73

S. E. COR. RES. 529.68

S.E. RES. GOING WEST.

NOTE: REVISED BECAUSE OF

S. ELY GUTTER INLET. SHOULD BE 528.83

S. ELY RES. GOING WEST TO 0+00



STKS. FOR A.C. RD. CONT.

SAME PARTY

51.

10/22/57

STA	EL.	GR.	CUT OR FILL	
		529.53	17	CO <sup>01</sup>
1+50	529.54	529.37	CO	To GUTTER (3)
		530.00	46	To EDGE RD. (5)
		529.62	16	CO <sup>05</sup>
1+00	529.67	529.51	CO	To GUTTER (3)
		530.00	33	To EDGE RD. (5)
		529.71	02	FO <sup>04</sup>
0+50	529.67	529.65	CO	To GUTTER (3)
		530.00	33	To EDGE RD. (5)
0+00	529.91	529.80	CO <sup>11</sup>	To GUTTER (3)
		530.00	09	To EDGE RD. (5)
T.P.	530.29=			
B.M.	530.31			END CURB
0+50	529.81	529.66	CO <sup>15</sup>	To GUTTER (3)
		530.00	19	To EDGE RD. (5)
1+00	529.93	529.51	CO <sup>42</sup>	To GUTTER (3)
		530.00	07	To EDGE RD. (5)
+50	530.30	529.37	C <sup>93</sup>	To GUTTER (3)
		530.00	30	To EDGE RD. (5)
2+00	530.02	529.23	CO <sup>79</sup>	To GUTTER (3)
		530.00	02	To EDGE RD. (5)

SEE PAGE 50 RE. CHANGES

F.B.  
CHECK B.M. 530.29 = 530.31 END CURB 927

WEST T  
WILLIAMS (SO. SIDE RES. GOING WEST  
To S.W. COR. RES.)  
COURTNEY

10/23/57

SUNNY



## STKS. FOR A.C. ROAD CONT.

STA	EL.	GR.	CUT OR FILL	
B.C.				83
2+12.35	530.02	529.19	C 0	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				81
2+38.45	529.93	529.12	C 0	To GUTTER (3)
		530.00	F 0	To EDGE RD (5)
				13
2+64.55	530.18	529.05	C 1	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				70
E.C.			C 0	To GUTTER (3)
2+90.89	529.70	529.00		
		530.00	F 0	To EDGE RD (5)
				17
2+50	530.21	529.04	C 1	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				21
2+00	530.26	529.19	C 1	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				26
1+50	530.03	529.34	C 0	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				03
1+00	530.11	529.49	C 0	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				42
0+50	530.22	529.64	C 0	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				11
0+50	530.22	529.64	C 0	To GUTTER (3)
		530.00	C 0	To EDGE RD (5)
				58
0+00	529.98	529.80	C 0	To GUTTER (3)
		530.00	F 0	To EDGE RD (5)
				22
0+00	529.98	529.80	C 0	To GUTTER (3)
		530.00	F 0	To EDGE RD (5)
				18
				02

SAME PARTY

52.

10/23/57

S.W. COR. RES. GOING NORTH TO N.W. COR. RES.

N.W. COR. RES.

CHECK B.M. 530.31 = 530.31



STKS. FOR A.C. ROAD CONT.

SAME PARTY

53.

10/23/57

STA.	FL.	GR.	CUT OR FILL	
B.M.	531.52			
0+00	530.22	529.80	C 0	$\frac{42}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{22}{}$ TO EDGE RD (5)
B.C.				
0+34.79	530.43	529.72	C 0	$\frac{71}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{43}{}$ TO EDGE RD (5)
0+55	530.15	529.68	C 0	$\frac{47}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{15}{}$ TO EDGE RD (5)
0+75	530.25	529.63	C 0	$\frac{62}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{25}{}$ TO EDGE RD (5)
0+83.92	530.02	529.62	C 0	$\frac{40}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{02}{}$ TO EDGE RD (5)
1+00	529.92	529.58	C 0	$\frac{34}{}$ TO GUTTER (3)
		530.00	F 0	$\frac{08}{}$ TO EDGE RD (5)
+50	530.00	529.47	C 0	$\frac{53}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{00}{}$ TO EDGE RD (5)
2+00	529.96	529.36	C 0	$\frac{60}{}$ TO GUTTER (3)
		530.00	F 0	$\frac{04}{}$ TO EDGE RD (5)
+50	530.11	529.25	C 0	$\frac{86}{}$ TO GUTTER (3)
		530.00	C 0	$\frac{11}{}$ TO EDGE RD (5)

N.E. Mon F.B 927-25

N. SIDE RES. 34.8 WLY OF B.C. OF CURVE



STKS. FOR A.C. ROAD CONT.

SAME PARTY

54

Windy In P.M.

10/23/57

STA.	EL.	GR.	CUT OR FILL	
B.C. 2+89.24	530.16	529.16	C 1 $\frac{00}{16}$	To GUTTER (3)
		530.00	C 0 $\frac{16}{64}$	To EDGE RD. (5)
$\frac{1}{3}$ 07 3+15.34	530.75	529.11	C 1 $\frac{64}{75}$	To GUTTER (3)
		530.00	C 0 $\frac{75}{22}$	To EDGE RD. (5)
$\frac{2}{3}$ 07 3+41.44	530.27	529.05	C 1 $\frac{22}{27}$	To GUTTER (3)
		530.00	C 0 $\frac{27}{46}$	To EDGE RD. (5)
0+15	530.13	529.77	C 0 $\frac{46}{23}$	To GUTTER (3)
		530.00	C 0 $\frac{23}{01}$	To EDGE RD. (5)
0+65	529.65	529.66	F 0 $\frac{01}{35}$	To GUTTER (3)
		530.00	F 0 $\frac{35}{03}$	To EDGE RD. (5)
1+15	529.52	529.55	F 0 $\frac{03}{48}$	To GUTTER (3)
		530.00	F 0 $\frac{48}{16}$	To EDGE RD. (5)
1+65	529.60	529.44	C 0 $\frac{16}{40}$	To GUTTER (3)
		530.00	F 0 $\frac{40}{36}$	To EDGE RD. (5)
2+15	529.69	529.33	C 0 $\frac{36}{31}$	To GUTTER (3)
		530.00	F 0 $\frac{31}{52}$	To EDGE RD. (5)
T.P. 2+25.60	529.69	529.31	C 0 $\frac{52}{17}$	To GUTTER (3)
B.C.		530.00	F 0 $\frac{17}$	To EDGE RD. (5)

N. SIDE RES. GOING WLY.



## STKS. FOR A.C. ROAD CONT.

SAME PARTY

55.

10/23/57

STA.	EL.	GR.	CUT OR FILL	
B.C. 2+60.60	529.66	529.23	C 0 <sup>43</sup>	To GUTTER (3)
		530.00	F 0 <sup>34</sup>	To EDGE RD. (5)
3+25	530.49	529.08	C 1 <sup>41</sup>	To GUTTER (3)
		530.00	C 0 <sup>49</sup>	To EDGE RD. (5)
3+68.50	530.02	528.98	C 1 <sup>04</sup>	To GUTTER (3)
		530.00	C 0 <sup>02</sup>	To EDGE RD. (5)

CHECK  
B.M.INLET #  
3

530.33 = 530.31 END CURB F.B. 927



EXPANSION CHECK ON M Line

E.T. Res

North Coping wall shows no movement

East Buttress Blocks show no movement

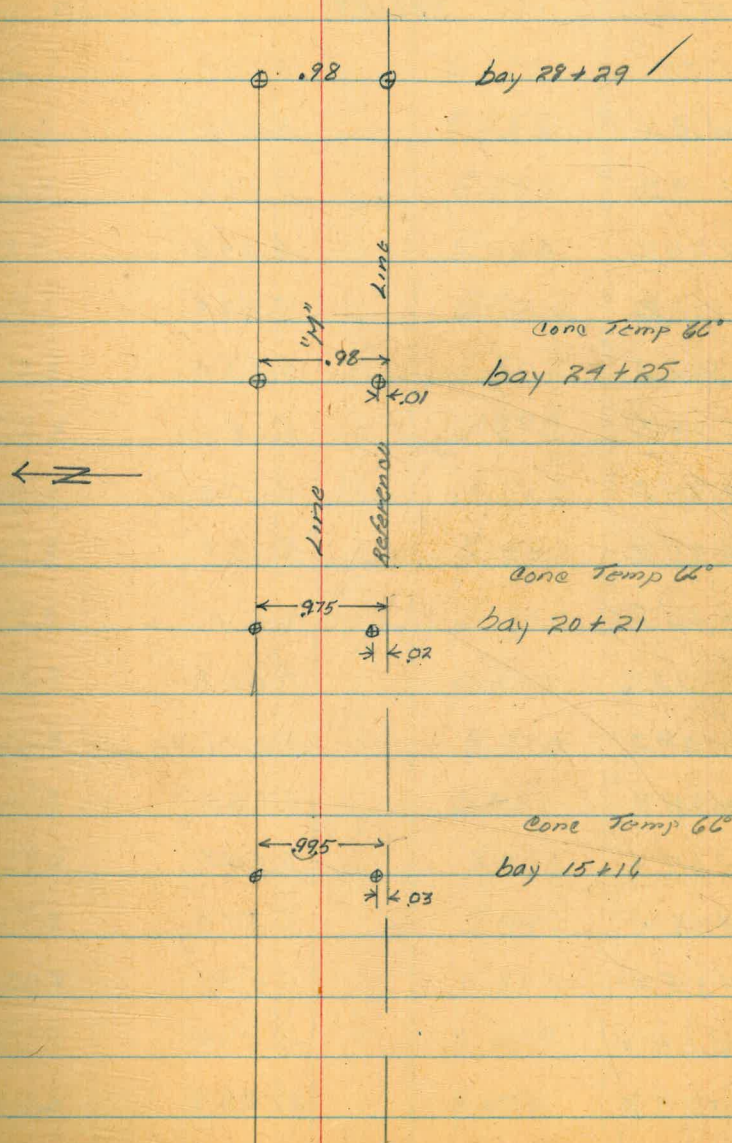
South Coping wall shows no movement

West Williams  
Courtney  
O'Brien

56

Cone Temp 66° in Shade

10-23-57





## EARL THOMAS RESERVOIR

## ROOF SLAB ELEVATIONS

STA.	+	HI	-	EL.
B.M.	6.160	537.683		531.523
				CON. Mon. N.E. Cor. RES
N.W.17Z			5.663	
N.W.18Z			5.592	
N.E.19Z			5.638	
N.W.20Z			5.640	
N.W.21Z			5.625	
N.W.22Z			5.650	
N.E.23Z			5.654	
N.E.24Z			5.650	
N.E.25Z			5.638	
S.E.26Z			5.662	
N.E.27Z			5.625	
N.W.28Z			5.651	
S.W.28Y			5.568	
N.W.27Y			5.545	
N.W.26Y			5.570	
S.W.25Y			5.576	
N.W.24Y			5.578	
N.W.23Y			5.555	

WEST  
WILLIAMS  
O'BRIEN  
COURTNEY

57

SUNNEY WARM

12/3/57

537.683

STA.	+	HI	-	EL.
NE22Y			5.590	
NW21Y			5.558	
NE20Y			5.553	
NE19Y			5.530	
NW18Y			5.522	
NE17Y			5.507	
NW16Y			5.488	
NE15Y			5.570	
SW13X			5.489	
SE14X			5.500	
SW15X			5.470	
SE16X			5.420	
SE17X			5.451	
SE18X			5.450	
SE19X			5.440	
SE20X			5.433	
NW21X			5.438	
SE22X			5.450	
SE23X				

Next page



ROOF SLAB ELEV'S. CONT.

SAME PARTY

58.

STA	+	537.683 HI	-	EL.
CHECK B.M	6.400	537.923	6.160	531.523 = 531.523
SE 23 X				5.678
SW 24 X				5.690
SE 25 X				5.653
NE 26 X				5.670
SE 27 X				5.647
SW 28 X				5.670
NW 28 W				5.601
NE 27 W				5.605
NW 26 W				5.581
SE 25 W				5.578
SE 24 W				5.574
NE 23 W				5.574
SW 22 W				5.584
NW 21 W				5.593
NE 20 W				5.607
NW 19 W				5.593
NE 18 W				5.580
NW 17 W				5.595
SW 16 W				5.594

STA.	+	HI	-	EL. 12/3/57
SE 15 W		537.923		5.580
NE 14 W				5.622
NW 13 W				5.630
NE 12 W				5.660
NW 11 W				5.650
SE 9 V				5.510
NE 10 V				5.549
SE 11 V				5.535
NW 12 V				5.501
NE 13 V				5.430
NE 14 V				5.431
NE 15 V				5.476
NE 16 V				5.450
NE 17 V				5.474
SE 18 V				5.486
NE 19 V				5.473
SE 20 V				5.489
SE 21 V				5.464
NE 22 V				5.448



## ROOF SLAB ELEV'S CONT.

STA	+	HI	-	EL
NW 23V		537.923	5.479	
NE 24V			5.454	
SE 25V			5.462	
NW 26V			5.454	
SE 27V			5.441	
NE 29V			5.190	
NW 28U			5.432	
SW 27U			5.370	
NW 26U			5.367	
SW 25U			5.388	
NW 24U			5.368	
SE 23U			5.377	
NW 22U			5.340	
SW 21U			5.370	
SE 20U			5.348	
NW 19U			5.402	
NW 18U			5.374	
SW 17U			5.417	
SE 16U			5.380	

West  
Williams  
O'Brien12-4-57  
Cool

59.

STA	+	HI	-	EL
SE 15U			5.401	
SW 14U			5.330	
NW 13U			5.363	
SE 12U			5.324	
SE 11U			5.328	
SE 10U			5.342	
NW 9U			5.362	
NW 8U			5.355	
			T	
SW 6T			5.261	
NW 7T			5.275	
NE 8T			5.230	
SW 9T			5.218	
SE 10T			5.213	
SE 11T			5.190	
SE 12T			5.188	
SE 13T			5.160	
SE 14T			5.187	
SW 15T			5.209	
SW 16T			5.280	



# ROOF SLAB ELEV'S CONT

7923  
 2583  
 340

538.523  
 5.940  
 532.593

60.

STA.	+	HI	-	EL.	STA.	+	HI	-	EL.
NW SE 17 T		537.923	5.260		SE 22 S		538.523	5.800	
NW NE 18 T			5.269		NE 21 S			5.802	
SE NW 19 T			5.263		SE 20 S			5.795	
NW SW 20 T			5.260		NE 19 S			5.801	
SE NW 21 T			5.266		SE 18 S			5.765	
NW SW 22 T			5.253		NE 17 S			5.790	
NW NE 23 T			5.237		SE 16 S			5.791	
NW SE 24 T			5.258		NW 15 S			5.732	
SW NE 25 T			5.270		NW 14 S			5.753	
NW NW 26 T			5.260		NW 13 S			5.743	
SW SW 27 T			5.260		NE 12 S			5.721	
NW NW 28 T			5.302		SE 11 S			5.681	
SE	7.000	538.523	6.400	531.523	NE 10 S			5.763	
NW 928		"5"	Line		SW 9 S			5.733	
SW NE 28 S			5.815		SE 8 S			5.750	
SE SE 27 S			5.775		SE 7 S			5.793	
NW SW 26 S			5.793		SW 6 S			5.770	
NW SE 25 S			5.767		SE 5 S			5.805	
SE SE 24 S			5.790		NW 4 S			5.800	
SE SE 23 S			5.794						



## ROOF SLAB ELEV'S CONT.

61.

STA.	+	HI	-	EL.	STA.	+	HI	-	EL.
		538.523			SW 20R		538.523		5.641
		"R" Line			SW 21R				5.660
SW 2R				5.718	NE 22R				5.660
NW 3R				5.700	SE 23R				5.675
NW 4R				5.701	SW 24R				5.664
NW 5R				5.694	SW 25R				5.680
SW 6R				5.663	NW 26R				5.648
SE 7R				5.678	SE 27R				5.650
SE 8R				5.635	SW 28R				5.771
SE 9R				5.637			⊙		Line
SE 10R				5.661	NW 28Q				5.648
SE 11R				5.650	NE 27Q				5.600
NW 12R				5.672	NW 26Q				5.599
NE 13R				5.586	SW 25Q				5.600
SE 14R				5.658	NE 24Q				5.589
NE 15R				5.664	NE 23Q				5.589
SE 16R				5.628	SE 22Q				5.586
NW 17R				5.688	NW 21Q				5.560
SE 18R				5.656	SE 20Q				5.552
SE 19R				5.650	SE 19Q				5.571



STA	+	HI	-
		538.523	
SW 18Q		5.560	
NW 17Q		5.559	
NE 16Q		5.556	
SE 15Q		5.521	
SE 14Q		5.538	
SW 13Q		5.514	
SW 12Q		5.527	
SE 11Q		5.500	
SW 10Q		5.540	
SE 9Q		5.534	
SW 8Q		5.543	
SE 7Q		5.575	
SW 6Q		5.579	
NW 5Q		5.600	
SW 4Q		5.569	
SW 3Q		5.625	
SW 2Q		5.590	

STA	+	HI	-
		"P" Line	
NE 2P		538.523	5.480
NW 3P			5.490
NW 4P			5.431
NW 5P			5.460
NW 6P			5.439
NE 7P			5.424
NW 8P			5.400
SW 8P			5.381
SW 10P			5.399
SW 11P			5.362
NW 12P			5.408
NW 13P			5.398
NE 14P			5.425
NE 15P			5.434
NW 16P			5.435
NE 17P			5.449
SE 18P			5.449
NW 19P			5.448
SE 20P			5.444



STA	+	Hi	-
		538.523	
NE 21P			5.460
NW 22P			5.476
NNW 23P			5.480
SW 24P			5.449
SE 25P			5.501
NE 26P			5.480
NW 27P			5.500
SW 28P			5.549
		○	Line
SW 280			5.510
SE 270			5.410
SE 260			5.400
SE 250			5.400
SW 240			5.419
SE 230			5.400
NE 220			5.420
NW 210			5.410
NW 200			5.429
SW 190			5.408

STA	+	Hi	-
		538.523	
SW 180			5.400
SW 170			5.400
SW 160			5.395
SE 150			5.390
NE 140			5.373
NW 130			5.378
NW 120			5.378
NW 110			5.390
NW 100			5.370
NW 90			5.362
NW 80			5.337
SW 70			5.390
NE 60			5.401
SE 50			5.401
SE 40			5.374
SW 30			5.410
SE 20			5.430



STA	+	Hi	-
		538.523	
		"N" line	
NW 2N		5.340	
NW 3N		5.312	
NW 4N		5.280	
NW 5N		5.307	
NW 6N		5.299	
NW 7N		5.302	
NW 8N		5.290	
SW 9N		5.288	
SE 10N		5.302	
SW 11N		5.317	
SW 12N		5.309	
SW 13N		5.310	
SE 14N		5.309	
SE 15N		5.337	
NE 16N		5.353	
NW 17N		5.332	
NE 18N		5.353	
NW 19N		5.372	

STA	+	Hi	-
		538.523	
NE 20N		5.301	
NW 21N		5.342	
NW 22N		5.343	
NE 23N		5.348	
NW 24N		5.310	
NE 25N		5.348	
NW 26N		5.361	
NW 27N		5.360	
NW 28N		5.369	
		"M" line	
NE 28M		5.413	
NE 27M		5.302	
SW 26M		5.312	
NW 25M		5.291	
SW 24M		5.290	
SW 23M		5.272	
NW 22M		5.268	
NE 21M		5.322	
NW 20M		5.274	



STA + HI -

538.523

NE 19M	5.290
SE 18M	5.308
NW 17M	5.294
NW 16M	5.295
NW 15M	5.234
NW 14M	5.297
NW 13M	5.275
NW 12M	5.267
NW 11M	5.269
NW 10M	5.281
NW 9M	5.270
NW 8M	5.255
NW 7M	5.301
NW 6M	5.298
NW 5M	5.333
NW 4M	5.357
NW 3M	5.343
NW 2M	5.325

STA + HI -

538.523

NW 2L	" L" Line 5.442
NE 3L	5.423
NW 4L	5.445
NW 5L	5.447
NW 6L	5.420
NW 7L	5.448
NW 8L	5.418
NW 9L	5.410
NW 10L	5.420
NW 11L	5.410
NW 12L	5.441
NW 13L	5.445
NW 14L	5.425
NW 15L	5.443
SE 16L	5.475
NW 17L	5.500
NE 18L	5.508
SW 19L	5.462
NE 20L	5.460



6

STA	+	HI	-
		538.523	
NW 21L		5.453	
SW 22L		5.511	
NE 23L		5.481	
NE 24L		5.432	
SW 25L		5.425	
SW 26L		5.437	
SE 27L		5.427	
SW 28L		5.400	
	"K" Line		
NE 28K		5.642	
NE 27K		5.569	
NW 26K		5.541	
NE 25K		5.596	
SE 24K		5.594	
SW 23K		5.587	
NW 22K		5.571	
NW 21K		5.598	
NW 20K		5.610	
NW 19K		5.605	

66

STA	+	HI	-
		538.523	
NW 18K		5.597	
NW 17K		5.592	
NW 16K		5.581	
NW 15K		5.530	
NW 14K		5.524	
NW 13K		5.514	
NW 12K		5.517	
NW 11K		5.513	
NW 10K		5.510	
NW 9K		5.502	
NW 8K		5.503	
NW 7K		5.524	
NE 6K		5.513	
NW 5K		5.524	
NW 4K		5.510	
NE 3K		5.500	
NW 2K		5.519	



STA + HT -

STA + Hi -

538.523

538.523

STA	HT	-
NW 2J	"J" Line	5.630
NW 3J		5.589
NW 4J		5.600
NW 5J		5.599
NW 6J		5.600
NW 7J		5.623
NW 8J		5.592
NW 9J		5.612
NW 10J		5.608
NW 11J		5.602
NW 12J		5.585
NW 13J		5.601
NW 14J		5.627
NW 15J		5.586
NW 16J		5.652
NW 17J		5.640
NW 18J		5.641
NW 19J		5.631
NW 20J		5.662

STA	Hi	-
NW 21J		5.665
NW 22J		5.646
NW 23J		5.638
NE 24J		5.627
NW 25J		5.659
NE 26J		5.661
SE 27J		5.647
NW 28J		5.688
NW 28i		5.785
NW 27i		5.744
NW 26i		5.761
NW 25i		5.761
NW 24i		5.752
NW 23i		5.777
NW 22i		5.734
NW 21i		5.770
NW 20i		5.764
NW 19i		5.752
NW 18i		5.742



STA + Hi -

539.523

NW 17i	5.730
NW 16i	5.762
NW 15i	5.721
NW 14i	5.728
NW 13i	5.715
NW 12i	5.714
NW 11i	5.716
NW 10i	5.727
NW 9i	5.697
NW 8i	5.701
NW 7i	5.693
NW 6i	5.741
NW 5i	5.729
NW 4i	5.714
NW 3i	5.710
NW 2i	5.750
H-Line	
NW 2H	5.816
NW 3H	5.787

STA + Hi -

539.523

NW 4H	5.790
NW 5H	5.821
NW 6H	5.800
NW 7H	5.801
NW 8H	5.761
NW 9H	5.782
NW 10H	5.777
NW 11H	5.742
NW 12H	5.730
NW 13H	5.760
NW 14H	5.743
NW 15H	5.794
NW 16H	5.815
NW 17H	5.829
NW 18H	5.849
NW 19H	5.829
NW 20H	5.829
NW 21H	5.843
NW 22H	5.832



STA + Hi -

538.523

NW 23H	5.840
NW 24H	5.831
NW 25H	5.839
NW 26H	5.830
NW 27H	5.829
NW 28H	5.860

G. Line

NW 28G	5.971
NW 27G	5.970
NW 26G	5.960
NW 25G	5.949
NW 24G	5.952
NW 23G	5.967
NW 22G	5.949
NW 21G	5.943
NW 20G	5.917
NW 19G	5.942
NW 18G	5.923
NW 17G	5.934

STA + Hi -

538.523

NW 6G	5.941
NW 5G	5.938
NW 4G	5.903
NW 3G	5.896
NW 2G	5.880
NW 1G	5.911
NW 10G	5.909
NW 9G	5.908
NW 8G	5.942
NW 7G	5.903
NW 6G	5.892
NW 5G	5.936
NW 4G	5.904
NW 3G	5.909
NW 2G	5.930

F Line

NW 2F	6.037
NW 3F	6.025
NW 4F	6.021



STA	H <sub>i</sub>	-
	538.523	
NW 5F		6.061
NW 6F		6.004
NW 7F		6.007
NW 8F		6.007
NW 9F		6.030
NW 10F		6.022
NW 11F		6.009
NW 12F		6.001
NW 13F		6.010
NW 14F		6.001
NW 15F		6.028
NW 16F		6.051
NW 17F		6.050
NW 18F		6.049
NW 19F		6.050
NW 20F		6.039
NW 21F		6.031
NW 22F		6.067
NW 23F		6.094

STA	H <sub>i</sub>	-
	538.523	
NW 24F		6.062
NW 25F		6.044
NW 26F		6.084
NW 27F		6.051
NW 28F		6.063
	ELme	
NW 28E		6.189
NW 27E		6.182
NW 26E		6.143
NW 25E		6.162
NW 24E		6.175
NW 23E		6.170
NW 22E		6.185
NW 21E		6.158
NW 20E		6.123
NW 19E		6.109
NW 18E		6.080
NW 17E		6.112
NW 16E		6.105



Sta	+ HI	-
	538.523	
NW5E	6.078	
NW14E	6.099	
NW13E	6.074	
NW12E	6.089	
NW11E	6.070	
NW10E	6.089	
NW9E	6.070	
NW8E	6.069	
NW7E	6.079	
NW6E	6.100	
NW5E	6.142	
NW4E	6.132	
NW3E	6.127	
NW2E	6.150	
	D Line	
NW2D	6.249	
NW3D	6.230	
NW4D	6.220	
NW5D	6.205	

Sta	+ HI	-
	538.523	
NW6D	6.202	6.208
NW7D	6.140	6.140
NW8D	6.154	6.154
NW9D	6.202	6.202
NW10D		6.163
NW11D		6.171
NW12D		6.183
NW13D		6.209
NW14D		6.204
NW15D		6.203
NW16D		6.220
NW17D		6.195
NW18D		6.184
NW19D		6.184
NW20D		6.201
NW21D		6.203
NW22D		6.198
NW23D		6.200
NW24D		6.261



Sta	+	H <sub>1</sub>	-
		538.523	

NW 25D		6.208	
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NW 26D		6.209	
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NW 27D		6.221	
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NW 28D		6.250	
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C Line

NW 28C		6.310	
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NW 27C		6.332	
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NW 26C		6.300	
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NW 25C		6.311	
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NW 24C		6.321	
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NW 23C		6.310	
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NW 22C		6.307	
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NW 21C		6.308	
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NW 20C		6.280	
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NW 19C		6.292	
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NW 18C		6.324	
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NW 17C		6.315	
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NW 16C		6.303	
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NW 15C		6.261	
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Sta	+	H <sub>1</sub>	-
		538.523	

NW 14C		6.291	
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NW 13C		6.299	
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NW 12C		6.340	
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NW 11C		6.343	
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NW 10C		6.359	
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NW 9C		6.339	
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NW 8C		6.365	
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NW 7C		6.368	
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NW 6C		6.351	
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NW 5C		6.351	
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NW 4C		6.365	
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NW 3C		6.371	
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NW 2C		6.380	
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Line B

NW 2B		6.472	
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NW 3B		6.470	
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NW 4B		6.457	
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NW 5B		6.430	
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NW 6B		6.469	
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Sta	+	H <sub>1</sub>	-	Sta	+	H <sub>1</sub>	-
		538.523				538.523	
NW 7B			6.420	NW 26B			6.384
NW 8B			6.451	NW 27B			6.358
NW 9B			6.450	NW 28B			6.369
NW 10B			6.453			Line "A"	
NW 11B			6.430	NW 28A			6.510
NW 12B			6.438	NW 27A			6.499
NW 13B			6.398	NW 26A			6.521
NW 14B			6.381	NW 25A			6.481
NW 15B			6.340	NW 24A			6.510
NW 16B			6.359	NW 23A			6.532
NW 17B			6.369	NW 22A			6.509
NW 18B			6.380	NW 21A			6.540
NW 19B			6.371	NW 20A			6.490
NW 20B			6.395	NW 19A			6.531
NW 21B			6.372	NW 18A			6.525
NW 22B			6.338	NW 17A			6.539
NW 23B			6.362	NW 16A			6.578
NW 24B			6.349	N.E. 15A			6.575
NW 25B			6.364	NW 14A			6.578



ROOF SLAB Elevs Cont

West  
Williams  
O'Brien

Cool 60° F 79  
Cloudy

12-4-57

Sta	+	H.I.	-	Elev
		538.523		
NW13A				6.629
NW12A				6.603
NW11A				6.609
NW10A				6.600
NW9A				6.635
NW8A				6.564
NW7A				6.572
NW6A				6.579
NW5A				6.561
NW4A				6.573
NW3A				6.595
NW2A				6.562
TBM	5.964	537.864	6.623	531.900
Check BM			6.349	531.515 = 531.523
BM	6.349	537.872		531.523
Check TBM			5.963	531.909 =
Check BM			6.349	531.523 = 531.523

= TBM in N.W. Coping Wall 10' N. of 10V



check Roof Expansion ET Res

West  
Williams

Sept 16, 58 2 PM. Hum 75

done Temp 106°F. Therm in shade  
and in contact with cone.

2+3 on 2

9+10 .010



.065  
15+16

.030  
.980

.050  
#19

Roof Line Sh Coping Wall

Roof Line

Roof Line Sh Coping Wall

.070  
20+21

.040 Bay 20  
.975 #21

.080  
#22

.060  
#21

.035 # Bay 24

.090  
24+25

.040 Bay  
.960 24+25

.040 bay 26

.020  
.970  
28+29



Check Roof Expansion ETRES

Line M

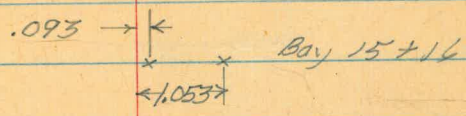
West  
Williams  
Henke

April 17, 59

76

Cone Temp 67°F  
Therm in shade + in  
Contact with Cone

→ Z →





CHECK ROOF EXPANSION EARL

(95° ON CONC. ROOF)  
IN SHADE  
(WATER ELEV. 521.53)

BAY 2 & 3



9 & 10

→ |← 0.006

15 & 16

0.041 →



← 15 & 16

→ |← 0.050

→ |← 0.995

20 & 21

0.062 →



← 20 & 21

→ |← 0.042

→ |← 0.976

22 &

0.065 →



24 & 25

0.088 →



← 24 & 25

→ |← 0.040

→ |← 0.960

28 & 29

→ |← 0.013

→ |← 0.960

REF. LINE SOUTH COPING WALL

REF. LINE "N" LINE

THOMAS RESERVOIR

77

SHOREY  
KEMP  
PULLEN  
HECHT

OCT. 14, 1959

P.M. WARM & BREEZY

BAY  
E 18

→ |← 0.042

BAY  
E 19

→ |← 0.050

NOTE: SET TRANSIT ON REF. PT. & BAY 26  
SIGHTED PT. ON SETTLING BASIN.  
USED THIS AS REF. LINE. HUB EAST  
OF RESERVOIR DESTROYED

E 21

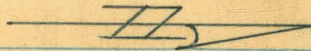
→ |← 0.050

E 24

→ |← 0.013

E 26

REF. LINE NORTH COPING WALL





CHECK ROOF EXPANSION EARL

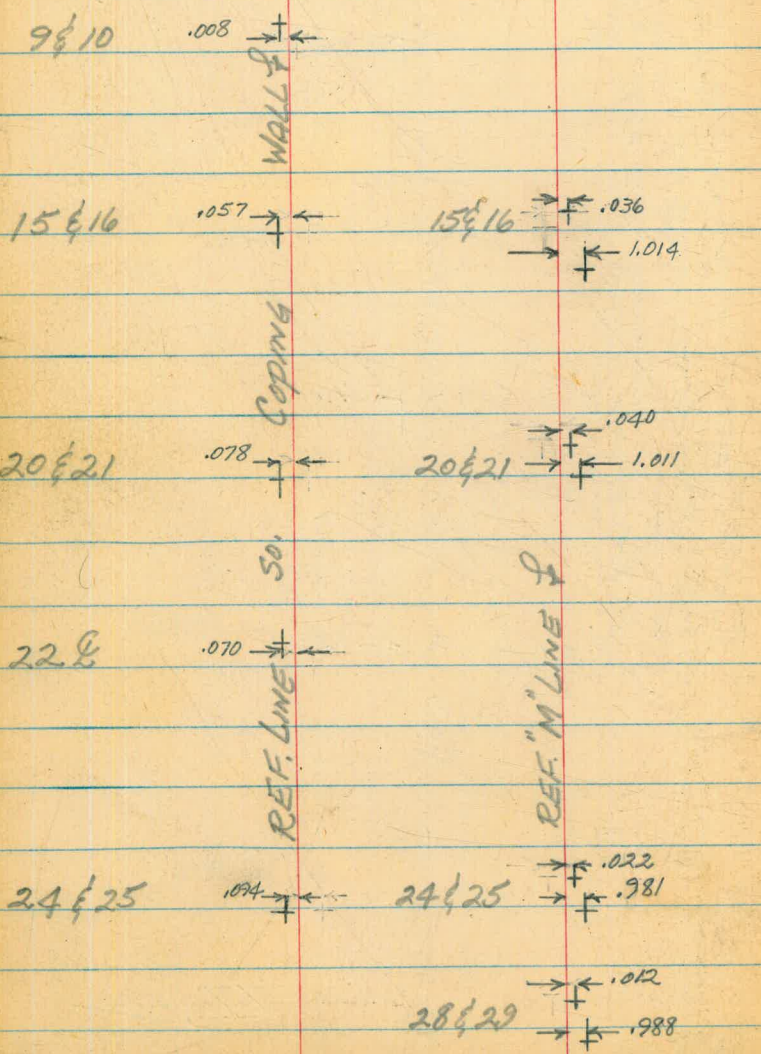
THOMAS RESERVOIR

(78) 1/15/60  
A.M. - COLD & CLEAR  
SHOREY  
KEMP  
PULLEN  
O'BRIEN

(45° IN CONC. ROOF  
IN SHADE -  
WATER ELEV. 520.20)

BAYS  
2 & 3

BAYS



8 18 → ← .034

8 19 → ← .035

8 21 → ← .038

8 24 → ← .009

8 26

SEE PAGE 77 FOR REF. LINE

WALL

COPING

NOE.

REF. LINE



CHECK ROOF EXPANSION

BAYS EARL THOMAS RES

2+3 on  $\Phi$

9+10 .035  $\rightarrow$   $\leftarrow$

15+16 on  $\Phi$

$\rightarrow$   $\leftarrow$  .052  
 $\rightarrow$   $\leftarrow$  .997

20+21 on  $\Phi$

$\rightarrow$   $\leftarrow$  .065 20+21  
 $\rightarrow$   $\leftarrow$  .999

22 .070  $\rightarrow$   $\leftarrow$

Ref Line "M"

24+25 on  $\Phi$

$\rightarrow$   $\leftarrow$  .040 24+25  
 $\rightarrow$   $\leftarrow$  .960

26+27 .100  $\rightarrow$   $\leftarrow$

$\rightarrow$   $\leftarrow$  .020 28+29  
 $\rightarrow$   $\leftarrow$  .960

Set  $\frac{3}{4}$ " IP RP  
 East of AC Berm  $\rightarrow$

Cone Temp 110°  
 In Shade "Hot"

1 PM Sept 13, 60  
 West  
 Williams  
 Nash

PLOTTED  
 C.M. 9-29-60

Ref Line

$\rightarrow$   $\leftarrow$  .059  $\Phi$  19

Wall

$\rightarrow$   $\leftarrow$  .070  $\Phi$  21

Coping

$\rightarrow$   $\leftarrow$  .019  $\Phi$  24

W/

$\rightarrow$   $\leftarrow$  .012  $\Phi$  26

Pipe has been  
 plowed out  $\rightarrow$

Set 1" IP 5' east of AC  
 ROAD



CHECK ROOF EXPANSION

EARL THOMAS RES

Boys

2+3 on  $\phi$   $\oplus$

Wall

9+10 .035  $\rightarrow$   $\leftarrow$   $\oplus$

Coping

15+16 .015  $\rightarrow$   $\leftarrow$   $\oplus$

Sly

20+21 .015  $\rightarrow$   $\leftarrow$   $\oplus$

Line

22 .080  $\rightarrow$   $\leftarrow$   $\oplus$

Ref

24+25 .013  $\rightarrow$   $\leftarrow$   $\oplus$

27 .110  $\rightarrow$   $\leftarrow$   $\oplus$

Line "14"

15+16  $\rightarrow$   $\leftarrow$  .037  
 $\oplus$   $\oplus$   
 $\rightarrow$  1.002  $\leftarrow$

20+21  $\rightarrow$   $\leftarrow$  .040  
 $\oplus$   $\oplus$   
 $\rightarrow$  1.000  $\leftarrow$

Ref

24+25  $\rightarrow$   $\leftarrow$  .030  
 $\oplus$   $\oplus$   
 $\rightarrow$  .980  $\leftarrow$

28+29  $\rightarrow$   $\leftarrow$  .015  
 $\oplus$   $\oplus$   
 $\rightarrow$  .980  $\leftarrow$

West Cono Temp  
 Williams 59°F  
 Allen

8:30 AM  
 March 3, 61  
 Cool + Cloudy



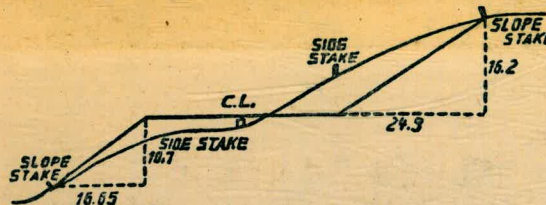
NOTE: SET UP NEW FIELD BOOK FOR FUTURE  
 WORK - R.D.S.

Plotted 9/28/61  
 JH





Please Return to  
 City of San Diego Water Dept.  
~~Room 903 Civic Center~~  
 Balboa Park  
 Laurel at Zoo Dr.



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**  
 SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.20	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

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