

6

Cross Section Book

No. 389.

W51

Coal

lime

3/4 mo

D.H. Hunt

FROM
LORING & CO.
Commercial & Manufacturing Stationers
Book Sellers & Office Furnishers
762 5th St. & 1327 F St.
SAN DIEGO, CALIFORNIA

MICROFILMED

JAN 6 1963

MICROFILMED

So Cal. Mt. Water Co

Mormon Dam of Annapolis Md.

Index

X-Sections Moore Dam 12-25-11	1-4
Masonry Profile Jan 3 1912	5
Masonry Profile Jan 31 1912	6-7
X-Sections Moore Dam Jan 31 1912	8-9
Santana Brush Estimate Feb 1 1912	10
X-Section Spillway Feb 2 1912	11-12
Santana Brush Estimate 2-29-12	13
X Sec Dam 3-2-12	15
Level 70' cont 3-3-12	20
Santana Brush Estimate	23
Level on 100' cont 3-3-12	24
" " 70' " 3-31-12	25
Dam profile 3-31-12	26
X Sec Dam 4-1-12	27
Location of 70' conts RP 3-29-12	31
Level on rim on 150' 4-3-12	32
Lateral Position of rim on 150' cont	
Apr 5-12	35
X Sec	36
Profile of Dam 4-29-12	39
Lateral 150' cont 4-29-12	41
Level on RP 150' 5-1-12	43
Position of rim 100' 5-3-12	45
Rom Bridge	50
Dist between expansion joint masonry wall	53

1. Cross-sectioning Norma Dam 12-25-11.

0 137. 135.5 127. 124.0 125.4 120.6
 30. 6 5.0 32 47
 (22.5)

137.4
 31.

0+56 133.5 133. 122.5 122.3 122. 114.1 102.1
 27 7 5 16 24 49

0+62 133.8 133 122 122 122. 101 101
 27 7 5 23 25 88

0+80 134 131. 126.2 121.6 124.8 ~~125.5 109~~
 35 30 8 7 21

1+00 130 126. 125.5 121.4 121.8 122. 107.3
 35 30 26 20 18 20

1+02 131 ~~128~~ 131.8 112.8 110.4
 35 21 18
 (23.5)

100. 99.2. 7
 75 87. 76.

99.5 101.2 88
 74 88

124.6 125 98 98 95
 22 25 88

105 106 103
 70 88

105 106 103
 70 88

2

1745	1324	136	1364	129	131
1747	35	25	8		31

1747	1324		129	133
1747	35			31

1767	130.6	130	150
	33		2.

1770	130	130	
	33		

1785	120	150	
	33		

5

118

118

125

131

0734 97.97 114 1224 123 123 134.4 134
 99.68 49.33 5 6 21

40
 0740 97 97 117 122 123 127 130
 100.68 36 35 5 21

0760 97 97 115 122 119.4 121 128.1 130
 97 68 35 30. 24 6 22

97.5
 97 96.5
 52

0766 109.5 99.5 113.8 116.7 128 130
 A 47 10 2 6 22

L

R
 1405 1224 120 1249 1263 1152 115 99.5 96.5
 32 25 24 2 6 10 97

1706 96 105 115 115 128 120 122
 97 10 6 2. 130. 23 25 82

4

96 92.99
99 78.441138 108.6 112 113.6 124.6 125
28 18. 2 2896
99
1447 96.109.112 113 124.6
92.44 21 18 2.
78.1150 96 92.85.104 124.2 124.6 125
99 78.70 25 23 28 ✓

1184* = TRANSIT A

1196 125 124 124.8 123.6
38 25 27 ✓1198 129 129 129 129 125 124
32 25 20 21 28 ✓2110 133.6 136.6 134.6
31 23 ✓2195 136.6 136.6 136.6
10 20 ✓STA 17835 STRINGS
- 429 -

1421 Color of top of tie end of track 120

5 Profit Marina Dam

184 S 12 Jan 3 1912

165 S	133	20 ¹ / ₂ N	138 ¹ / ₂
132 ¹ / ₂ S	134 ⁵ / ₈	21 ¹ / ₂ N	136
-131 ¹ / ₂ S	137 ⁶ / ₈	30 N	134 ⁸ / ₈
116 ¹ / ₂ S	135	32 N	138
115 ¹ / ₂ S	133	34 N	133
94 ¹ / ₂ S	132	51 N	134 ⁸ / ₈
93 ¹ / ₂ S	129	74 N	131 ⁵ / ₈
66 ¹ / ₂ S	127 ¹ / ₂	75 N	130
65 ¹ / ₂ S	131 ⁵ / ₈	99 N	132
50 S	135	100 N	133 ⁵ / ₈
0±00			
11 N	135 ³ / ₈	119 N	132
12 N	138 ¹ / ₂	120 N	129

United Submarine Services 2

143 ¹ / ₂ N	128 ¹ / ₂
144 ¹ / ₂ N	127
158 N	125
159 N	128
201 N	127 ¹ / ₄
202 N	134
206 N	134
206 ¹ / ₂ N	136
209 ¹ / ₂ N	136
209 ¹ / ₂ N	126

6 Maximum Profile Jan 31 1912

Sta 0+00	1272	3	94'S	132
5S	1423	4	107'S	132.6
6S	1405	5	108'S	1365
7AS	1388	6	117'S	1373
8AS	1356	7	119'S	1416
9S	1348	8	124'S	141
10S	1338	9	126'S	1458
11S	1335	10	134'S	1445
12S	1311	11	140'S	1463
13S	1315	12	144'S	1323
14S	1276	13	164'S	1328
15S	129	14	165'S	1303

25	172 $\frac{1}{2}$	1278	1 Sta 0+00N	142.1
16	173 $\frac{1}{2}$	1248	AN	142.4
17	174 $\frac{1}{2}$	124.1	3 3 5N	1399
18			4 7N	138.7
19	1429	1433	5 18N	1429
20			6 58N	1428
21			7 29N	1398
22			8 34N	1396
23			9 35N	142.4
24			10 61N	141.5
25			11 62N	140.0
26			12 67N	1394
27			13 68N	1433

7.

14 82¹/₂N 141.2

143.3

15 83¹/₂N 139.216 124¹/₂N 138.317 158¹/₂N 134.318 155¹/₂N 134.519 156¹/₂N 137.3

20 200K 134.5

21 280¹/₂N 136.322 280¹/₂N 120

23

24

25

26

1001	140.4
86	38
1505	136.3
38	

8

X-section Morona Dur

Jan 31, 1912

S 0 + 99

$$\frac{86}{102}$$

$$\frac{107}{116}$$

$$\frac{117}{144}$$

~~131~~

$$\frac{132}{9}$$

0 + 75

$$\frac{97}{70}$$

$$\frac{117}{162}$$

$$\frac{130}{162}$$

~~141~~

141

$$\frac{142}{4}$$

S 1 + 00

$$\frac{106}{78}$$

$$\frac{122}{27}$$

$$\frac{140}{11}$$

$$\frac{135}{9}$$

131

$$\frac{132}{9}$$

0 + 50

$$\frac{100}{82}$$

$$\frac{112}{47}$$

$$\frac{123}{15}$$

$$\frac{140}{14}$$

~~141~~

141

$$\frac{141}{42}$$

S 1 + 25

$$\frac{120}{38}$$

$$\frac{120}{25}$$

$$\frac{146}{32}$$

$$\frac{144}{5}$$

~~140~~

$$\frac{141}{5}$$

0 + 25

$$\frac{121}{57}$$

$$\frac{123}{16}$$

$$\frac{137}{152}$$

141

$$\frac{148}{4}$$

S 1 + 40

$$\frac{130}{42}$$

$$\frac{130}{22}$$

$$\frac{146}{21}$$

146

$$\frac{147}{13}$$

0 + 00

$$\frac{120}{62}$$

$$\frac{125}{172}$$

$$\frac{140}{162}$$

139

$$\frac{142}{35}$$

S 1 + 45

~~$$\frac{132}{110}$$~~

$$\frac{132}{50}$$

130

$$\frac{132}{7}$$

0 + 25

$$\frac{101}{40}$$

$$\frac{125}{512}$$

$$\frac{128}{172}$$

$$\frac{130}{17}$$

134

$$\frac{136}{63}$$

S 1 + 65

$$\frac{130}{252}$$

130

$$\frac{130}{10}$$

0 + 50

$$\frac{101}{85}$$

$$\frac{101}{47}$$

$$\frac{122}{46}$$

$$\frac{122}{18}$$

$$\frac{130}{162}$$

132

$$\frac{135}{7}$$

S 1 + 85

$$\frac{127}{3}$$

128

$$\frac{124}{12}$$

0 + 7

$$\frac{101}{85}$$

$$\frac{101}{47}$$

$$\frac{122}{46}$$

$$\frac{122}{13}$$

$$\frac{127}{9}$$

126

$$\frac{129}{9}$$

9.

2 + 95

$$\frac{136}{3}$$

136

$$\frac{136}{3}$$

2 + 50

$$\frac{136}{37}$$

136

$$\frac{136}{37}$$

1 + 75

$$\frac{136}{37}$$

136

$$\frac{136}{37}$$

1 + 50

$$\frac{132}{24}$$

136

$$\frac{138}{62}$$

1 + 25

$$\frac{96}{100}$$

$$\frac{120}{45}$$

$$\frac{127}{17}$$

$$\frac{138}{17}$$

137

$$\frac{138}{62}$$

1 + 00

$$\frac{97}{70}$$

$$\frac{122}{19}$$

$$\frac{138}{18}$$

138

$$\frac{139}{6}$$

11 X Sections of Spillway
Feb 2, 1912.

STA

0	144.8 142.9	142.9	143.	148	150
		14	32.4	33	60

0725	143	143.6	144.6	144	147
1		2.6	3.5	5.0	6.0

0750	143	144.3
		6.0

0775	142.7	143.9	146.2
		4.6	6.0

1700	142.9	143.3	148
		5.5	6.0

1725	143.4	144	143.	140.6	141.3
		2.1	4.0	4.2	6.0

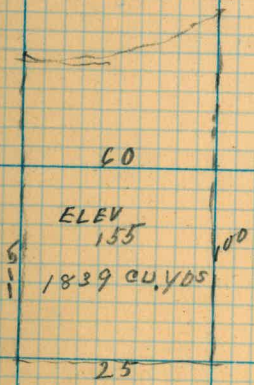
1750	1436	144.8	140	137.8	139.4
		30	34	50	60

1768	1432	143.	144.4	138.2	137.4
		12	32	37	60

1775	144	144	139	138	141
		10	20	36	60

2	144.3	145.6	140.8	140.3
		15	17	60

end of research add 60 cu yds



13

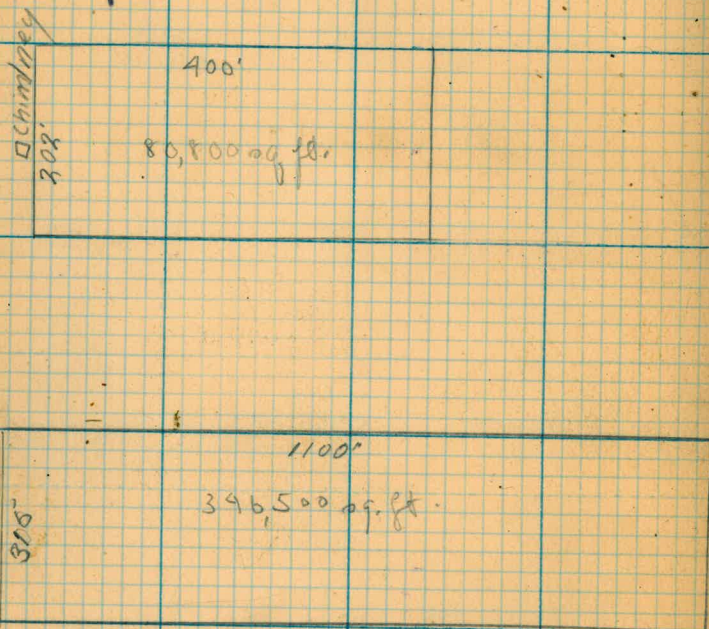
Santana Brush Estimate

Feb 29, 1912

R. W. Waterman

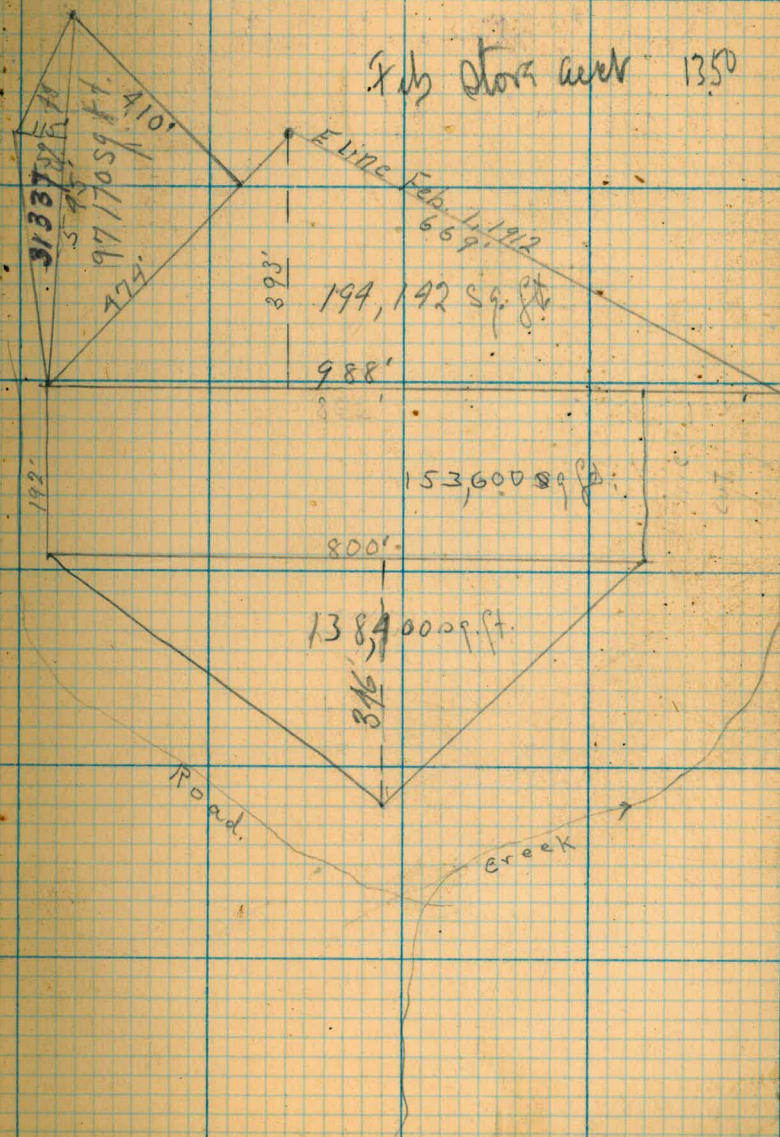
North of Cottonwood Creek

≈ 9.81 acre @ 12.00 = 117.72

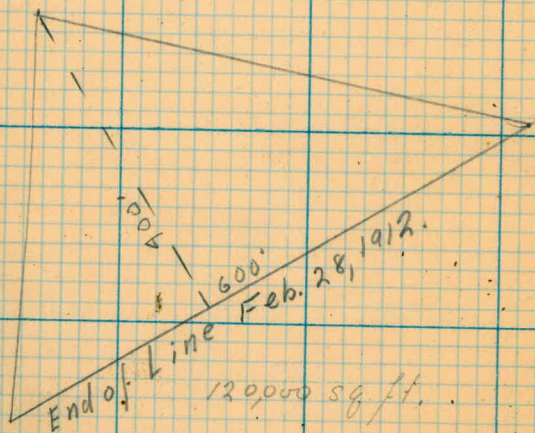


South of Cottonwood Creek

≈ 1686 acre @ 1000 = 1686.00



14.



26.21 A Total.

9.81 A Westside of Creek.

16.40 A East

15.

X SECTIONS D.H.M. CENTER
MARCH 2 1912

1199	99	98	109.0	121.0	122	132
	85	70	38.0	36		17

1100	99	98	111.0	113.0	120.7	128.5	132.0
	85	70	38.0	23.0	22.0		17

1110		104.0	114	144.7	145.0	136.7
		75	28	14.0		15.9

1118	106.0		116.0	150	150	144.7
	75		17.0	8		12.0

1120	108.0		118.0	150.0	150	150
	75		17.0	8		8

S 1138	125.3		130.0	150	150	150
	55		14	8		8

16.

0+44 98 119. 123. 127. 150 150 150
 87 56. 43. 9 8 8

5
 0+25 99 97. 112. 120. 122 134. 150 150. 150
 91. 82.0 63. 46 27 9. 8 8

0+50 995 164. 112. 120 120 150 150
 85 52 38. 37 32 8 8

0+61 98 98 121 121. 130. 150 150
 85 42 40 32 11. 8 8

0+62 98. 98. 121 121 130. 148. 146.5 147
 85. 42. 40. 32 11 9 9

0+67 98 100 121 121. 147. 146 140. 140.
 85 42 40 11. 9. 4 13.

0+75 98 98. 113.5 120.5 121.0 126.5 128.8
 85 63. 42 40 6 17.5

CENTER

1725 95 923 133. 140 141 150 150 150
 100 90 30. 20 9 8 8

1740 95 132 140 138 150 150
 92 30 20 9 8

0775 97 966 118. 128 130 150 150 150
 85 80 45 31 10 8 8

0760 96 1028 112 123. 150 150 150
 85 70 31 8 8 8

0750 96 96 117. 1227 124. 150 150 150
 85 78 46. 45 8 8 8

N
 6725 98. 98 116 122 125 146 146 146
 85 80 56 49. 9 8 8

18.

2109	134	137		137		137
	34	27				15

2106	133.4	136	137.5	142	140	140
	34	26	15	14	5	13

2100

1188	105	130.5	132.5	139.3	144	144	142.5
	75	32	22	12	11		12

1187	105	130.5	132.5	139.3	146.5	146	146
	75	32	22	12	11		10

1175	95			147	146.5		147
	92			9			8

1165		131	138	140	147	146.8	146.6
		28	18	9	8		8

1164		131	138	140	150	150	150
		28	18	9	8		8

1150	95.6	92.6	132.7	139.6	140	150	150
	100	93	29	18	9	8	8

1146				147	146		
				9			

SOUTH END

Rectangle 27x11x12 3564
 " 28x21x12.5 7350
 CUTT 358.
 Rock 11272
 Cor

414 5 yds
 74 "
 493

3733 143 129 129.5 130
 14 8 15

3716 143 130 129 129 114.7 120
 14 8 9 19

2794 143 130.0 130 120 120
 18 12 13 23

2793 143 135.5 135.5 135.5 120 120
 18 12 6 13 23

2784 135.5 136 135.5
 22 16

OR EAST
 RIGHT OF PINS
 NO 1 19/16 70' LINE
 NO 2 17/16 MAR 3 1912
 NO 3 9/16 AM

100' LINE

No 1 4/16
 " 2 1" 00
 " 3 1 3/16
 " 4 3" 00
 " 5 2 3/16
 " 6 15/16
 " 7 5/16

WOOD TOP OF HILL MAR 3-12
 4x6x16 = 256
 4x6x4 984
 14x6x4 336
 6x4x6 long 144 (15) 6
 4x4x16 256
 400
 CORDS.
 12.31
 8.12

	I	HI	-	
BM	2,245	102,755		100,510
N ^o 1			2,455	100,300
TP N ^o 2	4,825	103,955	3,625	99,130
N ^o 3			4,635	99,320
N ^o 4			3,825	100,130
TP N ^o 5	3,600	103,960	3,595	100,360
N ^o 6			3,925	100,035
N ^o 7			3,365	100,595
TP	2,400	104,120	2,240	101,220
TP N ^o 1	2,625	102,940	3,805	100,315
			2,415	100,525

PM. LEVELS 100' LINE MAR 3-1912

Must be an error of 1 ft here because from this was 100.45

Levels on 70' line Mar 3 1912

BM	2,415	102,925		100,510
TP	9,445	103,900	11,420	92,455
	0,225	80,585	11,520	80,316
N ^o 1			9,265	70,820
N ^o 2			10,695	69,89
N ^o 3			11,420	69,165
TP	11,290	72,490	0,185	81,400
TP	10,720	102,555	0,855	91,835
			6,055	101,500

Hubbard-Waterman

Must be an error of 1 ft here

31. Masonry Profile, Monna

Dam, March 8, 1912

Hubbard, Watman.

22.

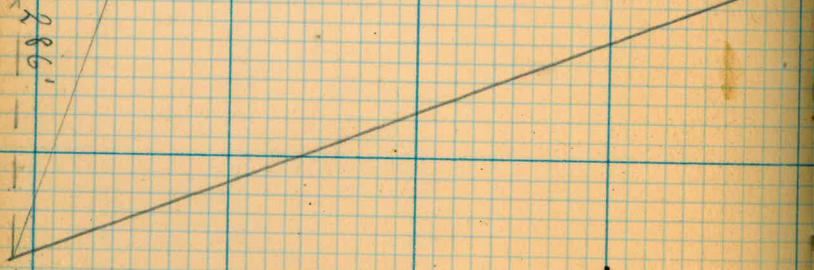
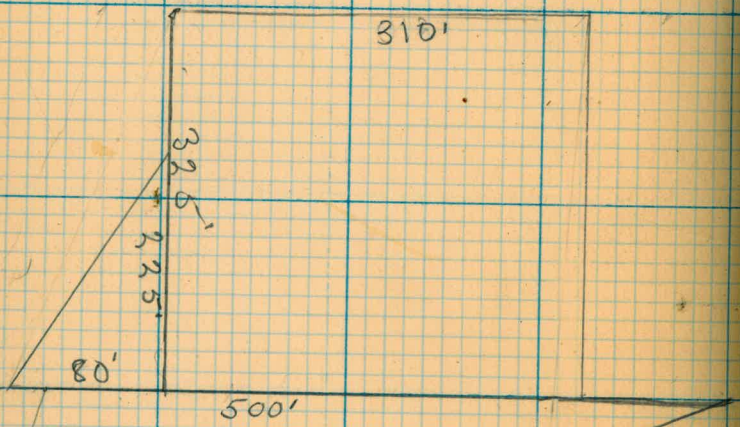
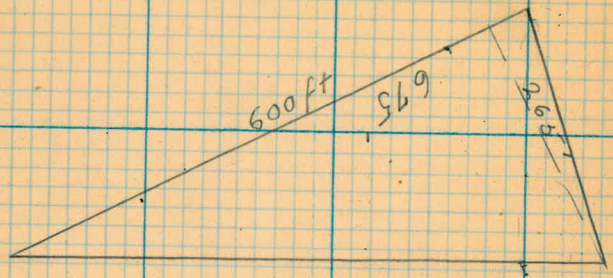


27.

Santana Brush Estimate

March 1912

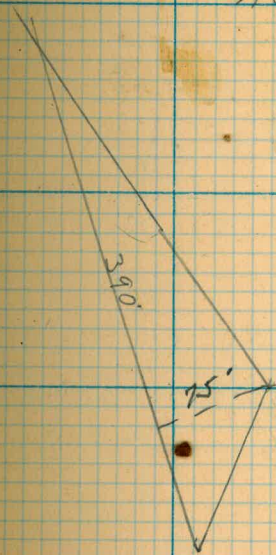
river water



3/31/12

285465 sq. Ft.

6.56 Acre.



Levels on 100' line

March 31st 1912

Waste Land
Hubbard Rod.
Waterman Rec.

+	HI	-	ELY		
			100.51 BM		
3.400	103.910	3.610	100.30 T.P.	Pin No. 1	10030
4.215	104.515	5.405	99.110 T.P.	Pin No. 2	99.13 (2)
6.345	105.455	5.175	100.280 T.P.	Pin No. 3	10032 (2)
4.660	104.940	4.860	100.080 T.P.	Pin No. 4	10013 (3)
4.765	104.845	4.530	100.315 T.P.	Pin No. 5	10036 (3)
3.990	104.305	4.305	100.000 T.P.	Pin No. 6	100035 (3)
4.065	104.065	3.485	100.580 T.P.	Pin No. 7	100595 (12)
3.620	104.200	3.580	100.620 T.P.	Pin No. 8	—
3.920	104.540	4.260	100.280	T.P.	
2.975	103.255	2.750	100.505	B.M.	

1042.0
103.58
100.62

Levels 70 Elron Dam.

3/31/12

Wueste Level
Hubbard Rod
Waterman Rec.

Sta	+	H.I.	-	Elv.	
				100.510	BM
1505		102.015			
			11.110	90.905	T.P.
1060		91.965			
			11.090	80.875	T.P.
0.600		81.475			
			10.685	70.840	T.P. Pin No. 1
5.350		76.190			
			6.290	69.900	T.P. Pin No. 2
6.010		75.910			
			6.730	69.180	T.P. Pin. No. 3
11.000		80.180			
			0.430	79.750	T.P.
11.175		90.925			
			0.020	90.905	T.P.
11.060		101.965			
			1.460	100.505	BM

26. Dam Profile South End. 3/31/12

4/1/12. Dam Profile North End

Sta.	+	HI	-	Elv	Rod.	Prof.
				144.9		
S 0+56						150.
0+56						147
+60						147.
+60				2.4		142.5
+63				2.4		142.5
+63				5.4		139.5
+75				4.3		140.6
+80				2.2		142.7
+93				2.9		142.0
+94				4.4		140.5
+12				4.6		140.3 B.C.
+13				2.5		142.4
+19				3.2		141.7
+20				—		150

Sta.	Profile.	HI = 149.3
12+00	150.	
+02	145.8	
+10	145.3	
+13	135.3	
+35	137.0	
+83	136.0	
+84	139.3	
+90	138.6	
+91	149.0	
3+02	144.4	
3+12	145.0	
+13	143.2	
+20	143.7	
+20	140.8	
+28	140.7	
+29	138.5	
+30	138.2	
+31	136.0	
+34	136.0	
+35	128.6	

(37)

Q

H.V. 1745.0

X. Sec. Dam. 4/1/12

Hubbard
Waterman.

0167	98	108		143.2	145.7	138.9	139.3
	85	75		12		3	13

115	120.5	127.
40	39.	12

0175	98	98	103.	109	140.5	140.5	140.7
	90	76	74	50. A	12		12

0199	98	102.0	109	120.7	122	141	139	140.4
	75	60.	38	36	18	12		12

1100	99	102.4	110	113.1	141.2	139.4	140.2
	85	75	37.	23	22	12	12

1110	105	117	144.7	145	140.3
	75.0	23	14		12

1118	122	116.2	116	150	150	141.7
	50	20	17	8		12

1120	122	122.	150	150	150
	50	17	8		8

20

♀

1259

9

N	0+25	98	109.7	1215	122.	(126 133)	150
		85	75	49	44	(43. 9)	8

0+00	98	106		150
	87	75		8

S	0+25	99	103.4		150
		91	75		8

0+50	99.5	100.4		150
	85	77		8

0+61	98	103		150	150	150
	85	75		8		8

0+62	98	103	130	148	1465	147
	85	75	11	9		9

29

2 139 139 140 150 150 150
 30 17 9 8 8

1775 105 132 132 141 150
 75 34 24 9 8

1750 92.6 104.5 133.5 139.6 139.6 150
 23 75 32 21 9 8

1725 95.5 107 132 132 139 150
 85 75 32 21 9 8

1700 95 102 139 133 150
 85 75 32 9 8

0775 97 105 130 139 150
 85 75 32 10 8

0750 96 108.4 117 122.7 124 150
 85 75.44 45 9 8

30

+	3720	145 30	145 14	1356 120	1408 North edge of wall on center line	00 00
---	------	-----------	-----------	-------------	--	----------

+	312		144 30	144	144	6.
---	-----	--	-----------	-----	-----	----

+	2192		144 30	144	144	11
---	------	--	-----------	-----	-----	----

0	2+90		1355 30	1355	1355	155
---	------	--	------------	------	------	-----

	2+10		137 30	137	137	155
--	------	--	-----------	-----	-----	-----

3)

Location of Reference PointsOn 70 and 100 lines.

70'

Ctr Bay #5 to RP 1 = 6.9'

Ctr Bay #5 to RP 2 = 90.0'

RP 2 to RP 3 = 70.5'

100'

Ctr Bay #5 to RP 2 = 19.8'

RP 2 to RP 1 = 44.5'

Ctr Bay #5 to RP 3 = 26.8'

RP 3 to RP 4 = 46.4'

RP 4 to RP 5 = 42.5'

RP 5 to RP 6 = 47.5'

RP 6 to RP 7 = 53.2'

RP 7 to RP 8 = 41.4'

Box 108

Box 95

Box 82

Box 77

Box 63

Box 53

Box #5

Box 43

Box 32

Sta 160.5 N
Sta 162.7 N
Sta 155.0 N
Sta 73.2 N
Sta 29.8 N
Sta 19.8 N
Sta 6.9 S

Sta 160.5 N

Sta 90.0 N

Sta 6.9 S

100' Line

70' Line

Wueste-Water -

Mar. 29, 1912

110011

Levels on Pinn on 150

069 148.97

148.28

058 148.39

581 154.20

410 $\frac{1}{2}$ 150.09 $\frac{1}{2}$ no 8 $\frac{1}{2}$

461

149.59 no 8

461 $\frac{1}{2}$ 149.58 $\frac{1}{2}$ no 7 $\frac{1}{2}$

456

149.64 no 7

436

149.84 no 6 $\frac{1}{2}$

434

149.86 no 6

410 150.10

no 5 $\frac{1}{2}$

476 154.86

505

149.81 no 5

516

149.70 no 4 $\frac{1}{2}$

506

149.80 no 4

490

149.96 no 2 $\frac{1}{2}$

11.26

468

Apr 3/9/12 Wueste-dubband

#02

154.86

505 $\frac{1}{2}$ 4980 $\frac{1}{2}$

521 155.01 $\frac{1}{2}$

1126 143.75 $\frac{1}{2}$

498 148.73 $\frac{1}{2}$

045 148.28 $\frac{1}{2}$ ✓

8m

10 19 ✓

16 16 $\frac{1}{2}$ ✓

34

Placing 121' lines on Bay 4 4½ 05

Apr 3 West Hubbard 1912

334

124.34

121.00 =

mark on
old bay.

334

121.00

Distances from 120' line to 121' grade
on Bay 4 4½ 05.

* 4 = 58"

* 4½ = 47"

* 5 = 0.54'

35/ Lateral Position of Pin
on 150' Crest Line

April 3, 1912

R. Wueste, Chief
R. W. Waterm Rec.
Henry Hubbard, Trng.
Henry Parillo, Exp.

Crest Line to Pin. # 2 1/2

		W 4 1/16"			
Do	4	W 7 1/8"		8 1/2	6 1/2" 4 5/8"
Do	4 1/2	W 8 1/4"		8	5 1/4" 5"
Do	5	W 6 13/16"		7 1/2	5 3/8" 5"
Do	5 1/2	W 7 3/4"		7	4 7/8" 4 1/4"
Do	6	W 5 3/4"	W		
Do	6 1/2	W 6 1/4"		6 1/2	6 1/4" —
Do	7	W 4 7/8"		6	5 3/4" 3 1/2"
Do	7 1/2	W 5 3/8"		5 1/2	7 3/4" 5 1/4"
Do	8	W 5 1/4"		5	6 13/16" 4 3/4"
Do	8 1/2	W 6 1/2"		4 1/2	8 1/4" 4 1/4"
				4	7 1/8" 4 1/4"
				0	4 1/16" 4 3/8"
				2 1/2	

E

S

36

Cross sections April 29, 1912

2715	139	00	00	00
	26	8		

2700	135	136	146	00
	32	26	10	8

62 cu yds

1440	130	140	141	00
	38	18	9	8

1700	134	134	00	00
	32	8		

N				
0795	00	00	00	00
	8			8

181 Cuyds

2+90 to end same as last month.

2+91 BMY

2+90	1355 30	1355	1355 155
------	------------	------	-------------

2+55	136 30	136	136 7
------	-----------	-----	----------

subtract 15 x 27 x 3 45 yds

2+50	136 30	136 143 7	143 11
------	-----------	--------------	-----------

633

2+44	136 30	136 136 7	143 11
------	-----------	--------------	-----------

2+40 N	00 8	00	00 8
--------	---------	----	---------

38

418 curpa
80
498

1786

1772 BAY

1744 BAY

1745

1738

1725

1700

1720

129
185

138
30

138
30

138
30

132
30

150
8

150
8

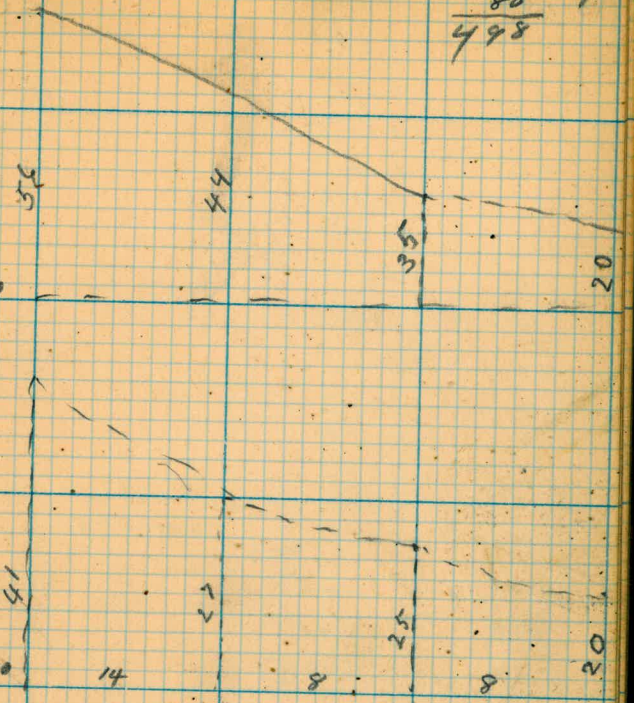
150
8

150
8

150
8

ELEV 150

ELEV 138



39
 Profile of Dam April 29 1911

1738	150.0
1743	138.0
1751	136.0
1751	139.2
1756	139.
1756	138.2
1762	138.0
1765	131.0
1769	131.0
1770	133.0
1777	133.0
1778	128.8
1786 S	129.0

+50 N	140.0
+28	140.0
+27	143.5
+13	143.2
3+12	144.5
3702 Be	144.4
2791	144
2790	138.6
2784	139
2783	136
2755	136.0
2750	143.5
2744	143.0
2743	148.0
2741	148.0
2740	150.0
0700 N	150.0

elw 131 top of concrete
 3' wide 27' long

LIME
40 BBL'S
4 SLACK

April 29 1912 PM

GROUND

750 128 149 55

740 135 18 6 17 10

30 138 75 48 26 00

720 15 41 08

710 163 35 44

0 174 10 16 19 70

SAND Cement

B 456
C 324
S 271
1051 SACKS

TRIANGLE 27 x 6 x 2

128 5 144 55

135 5 153 5 16 6 17 10

138 3 153 7 164 3 16 12 80 11 00

15 5 168 5 176 5 155 26 08

143 10 18 25 44

124 4 18 4 145 19 70

41
 Sateral Position of Pine
 on 150 foot crest line
 Apr 29 1912

Crest Line to Pine	2½	W 4 ¹³ / ₁₆ "	³ / ₄
	4	W 8 ³ / ₈ "	¹ / ₄
	4½	W 8 ³ / ₈ "	¹ / ₂
	5	W 7 ⁵ / ₈ "	¹³ / ₁₆
	5½	W 9 ¹ / ₈ "	³ / ₈
	6	Form in way	
	6½	Form in way	
	7	W 6 ¹ / ₁₆ "	³ / ₁₆
	7½	W 6 ¹ / ₂ "	¹ / ₈
	8	W 6"	³ / ₄
	8½	W 7 ⁵ / ₁₆ "	¹³ / ₁₆

West Subband Paredes

42. ~~May 1 1912~~

~~Series on PPs on 100' hill
west. max. lab.~~

~~498 10529~~

100.51

5.19 $\frac{1}{2}$

43 May 1 1912 Sinds on RP: on 150'

0.35 148.63 1/2

148.28 = BW

0.66 147.97 1/2

6.60 154.57 1/2

#15 8 1/2

4.53

150.04 1/2 0.05

#14 8

5.03 1/2

149.54 0.05

#13 7 1/2

5.04

149.53 1/2 0.05

#12 7

4.99 1/2

149.58 0.06

#11 6 1/2 concrete in way

#10 6 concrete in way

4.49 1/2 150.08

= 3 1/2 inches above #6 149.79 0.07

4.53 1/2 154.61 1/2

#9 5 1/2

4.59

150.02 1/2 0.07 1/2

#8 5

4.88

149.73 1/2 0.07 1/2

#7 4 1/2

4.88

149.73 1/2 ?

1199 ✓

5-6.5 x 2 ✓

East Side West Bubbard

47

1546 1/2

3 2 1/2

468 1499 3 1/2

276 1526 9 1/2

1153 14116 1/2

131 1/2 142.48

766 1/2 1248 1/2

3 2 1/2 469 1546 2 1/2

1499 3 1/2

4

488 1/2

454 1/2 150.08

446 15454

655 147.99

055 148.54

025 148.29

9.70 ✓

16.02

180
1348 1/2
578 1/2
259

0.02 1/2

• Kubshovli: template at sand abutment

0.02 1/2

129.74

0.06

Laternal Position Pairs on

100' line May 3, 1962

Wrestle Subband

- #1 line $\frac{5}{8}$ " East of ctr
- #2 $1\frac{1}{2}$ "
- #3 $2\frac{5}{8}$ "
- #4 $3\frac{13}{16}$ "
- #5 $2\frac{7}{8}$ "
- #6 $1\frac{1}{4}$ "
- #7 on ctr
- #8 $\frac{11}{16}$ " West of ctr

46 Seeds on R Ps 100' line
May 3 1912 Wm. H. Harkness
34710398 10051

1 367½ 100.30½ (100½ higher?)

2 488 99.10 99.10 .03

49310403

3 377½ 100.25½ .06½

4 397½ 100.05½ .07½

5 373 100.30 .06

6 404 99.99 99.99 .04½

345½ 103½

7 283½ 100.58 .00

8 279 100.62½ (100½ higher?)

47

332

103.94 $\frac{1}{2}$

10062 $\frac{1}{2}$

369

100.25 $\frac{1}{2}$

402 $\frac{1}{2}$

104.28

378

100.50 ✓

48

14828

11

14839

141.67

677

14839

1411

729

14520

88

14716.2

14839

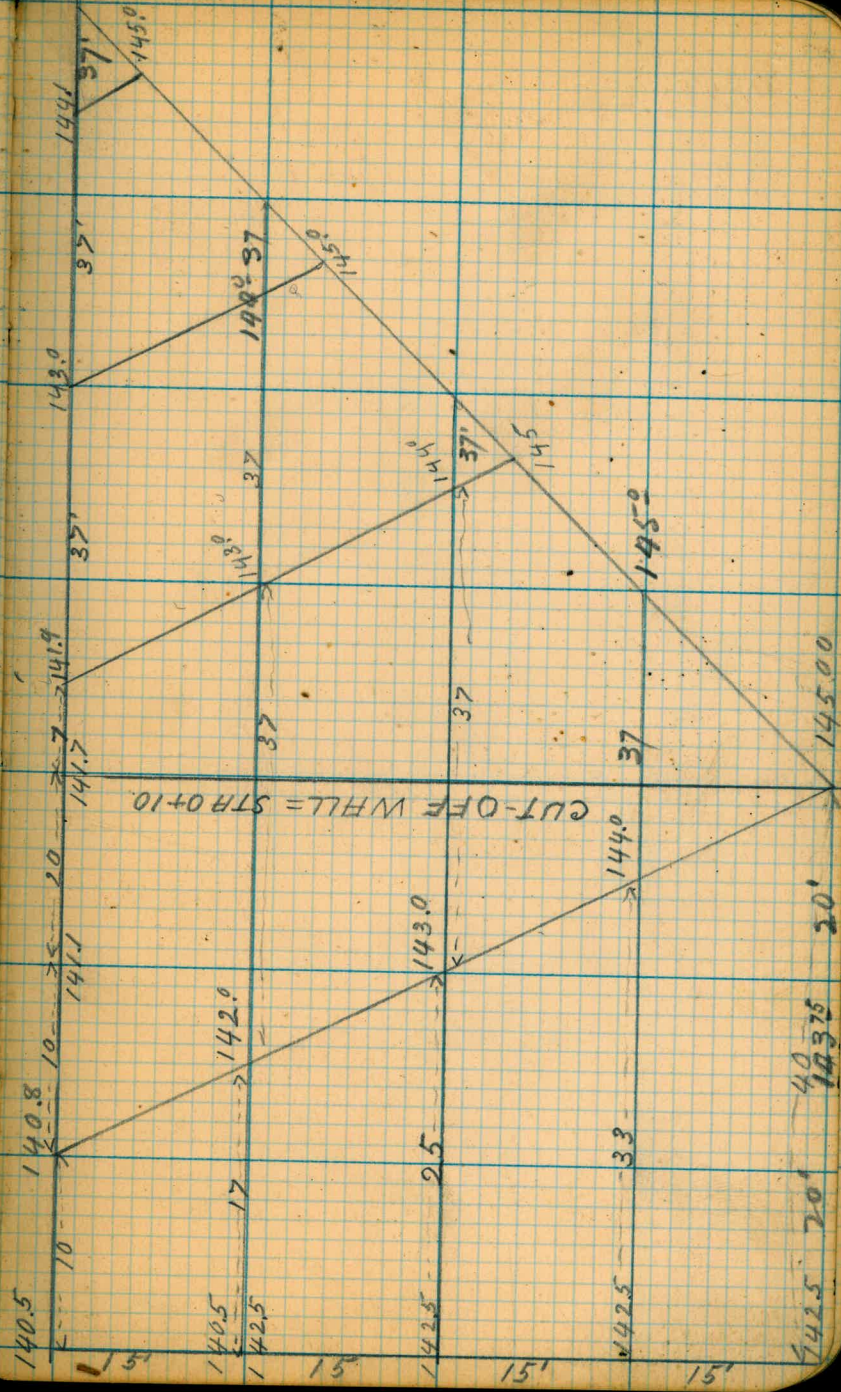
1417

669

4839

10430

14789



A1

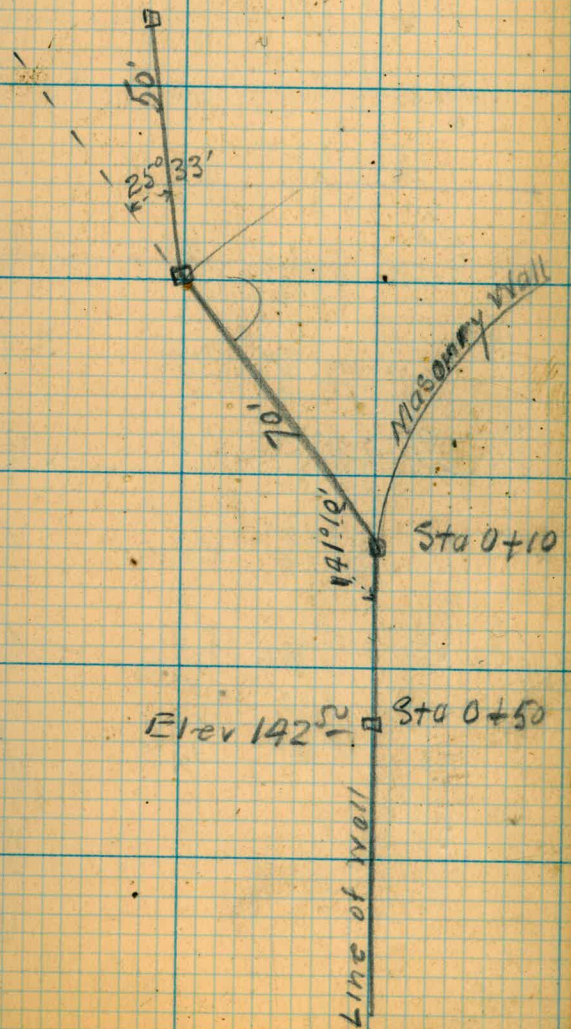
62.2

4.0

67

180
2533

154.27
77.13E



Horse Bridge along cliff above
Big Boiler to Dam.

No	Plank width	Strut Lengths	Floor Beam Lengths
1		6'10" 6.85	5'8 1/2" 572
2	7 1/2"	6'7 1/4" 6.60	5'6 1/2" 554
3		8'8 1/2" 8.70	5'11 3/8" 595
4	5 1/2"	9'10 1/2" 9.88	6'3 1/4" 626
5		12'3 3/4" 12.06	7'4" 732
6	4 1/2"	13'5" 13.40	8'2 1/2" 821
7	5 1/4"	6'7 3/4" 6.65	5'10" 584
8	5 1/2"	5'11 1/2" 5.96	5'7" 559
9	7 1/4"	5'8 3/4" 5.73	6'0" 6.01
10	5 1/4"		5'9" 575
11			6'2 1/2" 620
12			5'6" 551

No	Strut Lengths	Floor Beam Lengths
13	6'6 1/4" 748	5'8" 567
14		6'2 1/2" 620
15	7'4 1/2" 826	7'0" 700

51

Distances bet expansion
joints on 150' level

# 0 - $\frac{1}{2}$	22.6	$5\frac{1}{2}$ - 6	24.2
$\frac{1}{2}$ - 1	18.3	6 - $6\frac{1}{2}$	24.1
1 - $1\frac{1}{2}$	18.9	$6\frac{1}{2}$ - 7	25.9
$1\frac{1}{2}$ - 2	24.1	7 - $7\frac{1}{2}$	25.3
$2\frac{1}{2}$ - $2\frac{1}{2}$	24.25	$7\frac{1}{2}$ - 8	18.85
$2\frac{1}{2}$ - $3\frac{1}{2}$	24.6	8 - $8\frac{1}{2}$	25.05
3 - $3\frac{1}{2}$	24.2	$8\frac{1}{2}$ - 9	27.65
$3\frac{1}{2}$ - 4	24.7	9 - $9\frac{1}{2}$	24.0
4 - $4\frac{1}{2}$	25.4	$9\frac{1}{2}$ - 10	24.15
$4\frac{1}{2}$ - 5	25.0	10 - $10\frac{1}{2}$	24.7
5 - $5\frac{1}{2}$	24.35	$10\frac{1}{2}$ - 11	23.15
	256.40	11 - end	56.0
			323.05

3230.5
256.40
579.45 = total length.

222.70
24.54

Notes for Trestle Spans
of Moravia chain Bridges

Bent 1 to Bent 2 16.45

Bent 2 to Bent 3 13.0

#15 chain set to Bent 1

Bench mark at East landing
= 3 1/2" below grade of concrete
sill with 6x8 cap, 4x6 string
and 2" plank above same.

4475
2945
1490

53/ Sunk for coping wall May 2
1982

691	155.19	14828	512
8½			523
8			518
7½			517
7			521
6½			521
6			

150.07	- 1/8"	150.08
149.96	- 1/2"	150.08
150.01	- 3/8"	150.08
150.02	- 3/4"	150.08
149.98	- 1 1/2"	150.08
149.98	- 1 1/4"	150.08

54

Levels for Post Supports
of Trestle Bents on Morona

Bm	084	153.58	152.74
----	-----	--------	--------

Bent # 2 L+	(10.32)	1123	142.35
0		1089	142.71

239 145.10

Bent # 1 R+	(11.19)	362	141.48
-------------	---------	-----	--------

Bent # 1 L+	(11.95)	438	140.72
-------------	---------	-----	--------

Bent # 2 R+	(9.09)	152	143.58
-------------	--------	-----	--------

Bm	063	153.37	152.74
----	-----	--------	--------

Bent # 3 L+	(1=9.43)		
	(0=10.48) ✓	1013	143.24

Bridge June 4 1912.

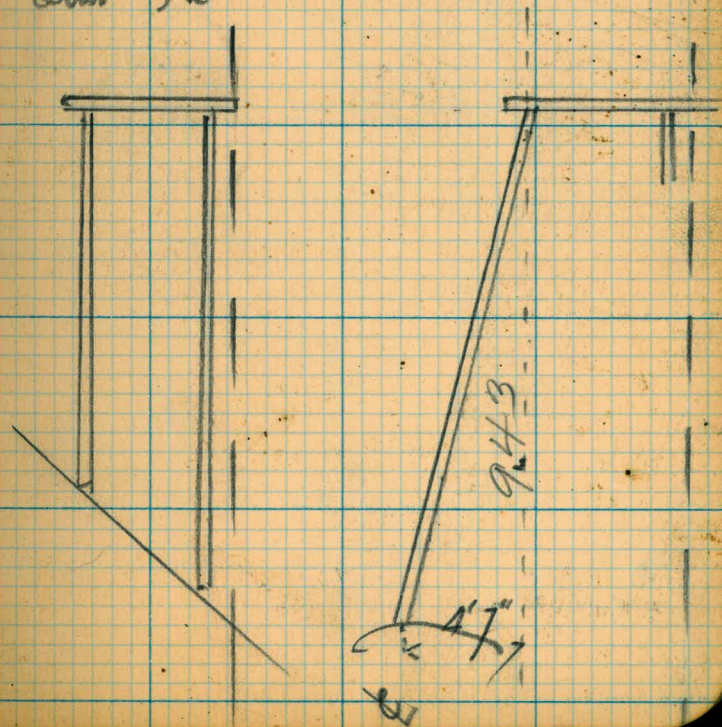
Note:

154.00 = assumed elev of Bridge floor at west abutment.

Note: allow 1.33 for cap stringer + floor

Note:

Bent # 3 L+ will be batters



55 Seeds for top concrete facing
South abutment

Bm 642 154.70 148.28

458 150.12

409 154.21

398 150.23

582 156.05

16.33
8.56

7.77

8.56

Bm 685 155.20

020 155.40

512 150.28

465 154.93

250 152.43

257 155.00

Bm 672 148.28 ← 148.25

June 9 1912

West
Erlanger

493
208

285

493
242

251

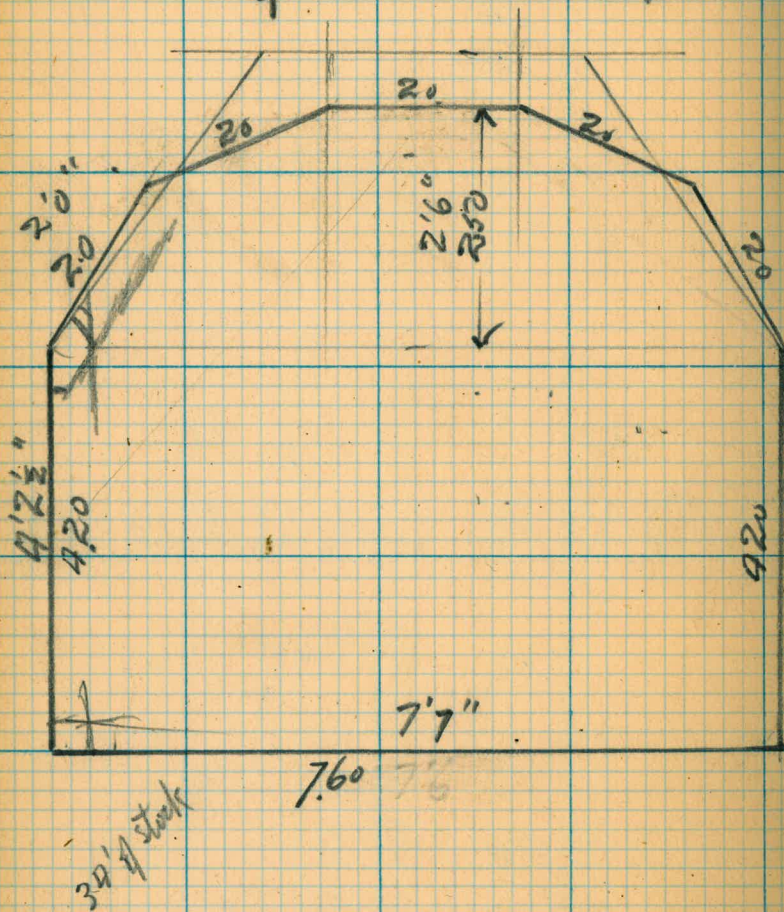
256 234

242

15493
5020

14991

Sketch of Iron Door
for Maxine Carter Tunnel



June 15 1912
 Wurst
 husband

57 Line ~~and levels on R.P.~~ on 100 line
Monna Dam

# 1	$\frac{8}{16}$	$\frac{9\frac{1}{2}}{16}$	=	av. $\frac{8\frac{3}{4}}{16}$ "	West of line
# 2	$1\frac{12}{16}$	$1\frac{9\frac{1}{2}}{16}$	=	$1\frac{10\frac{3}{4}}{16}$ "	"
# 3	$2\frac{15\frac{1}{2}}{16}$	$3\frac{2}{16}$	=	$3\frac{3\frac{1}{4}}{16}$ "	"
# 4	$4\frac{11\frac{1}{2}}{16}$	$4\frac{8}{16}$	=	$4\frac{9\frac{3}{4}}{16}$ "	"
# 5	$3\frac{8}{16}$	$3\frac{14}{16}$	=	$3\frac{11}{16}$ "	"
# 6	$1\frac{10}{16}$	$1\frac{10\frac{1}{2}}{16}$	=	$1\frac{12\frac{1}{4}}{16}$ "	"
# 7	$\frac{9}{16}$	$\frac{14}{16}$	=	$\frac{11\frac{1}{2}}{16}$ "	"
# 8	$\frac{4}{16}$	$\frac{1}{16}$	=	$\frac{2\frac{1}{2}}{16}$ "	East of line

Wrest. Swenson. Mundoza Oct 18 1942

May 3 1942

$\frac{5}{8}$	$\frac{3}{16}$
$1\frac{1}{2}$	$\frac{3}{16}$
$2\frac{1}{8}$	$\frac{7}{16}$
$3\frac{13}{16}$	$\frac{13}{16}$
$2\frac{3}{8}$	$\frac{13}{16}$
$1\frac{1}{4}$	$\frac{8}{16}$
OK	$\frac{11}{16}$
$\frac{11}{16}$	$\frac{9}{16}$

55

Seeds on RPs on 100' line
Mouss Dam

RP#1	353	104.04	100.51
		374 $\frac{1}{2}$	100.29 $\frac{1}{2}$
RP#2	423 $\frac{1}{2}$	104.53	544 99.09
	493 $\frac{1}{2}$	104.02 $\frac{1}{2}$	
RP#3			378 $\frac{1}{2}$ 100.24
RP#4	354	103.78	
			374 $\frac{1}{2}$ 100.03 $\frac{1}{2}$
RP#5	353	103.56 $\frac{1}{2}$	
			329 $\frac{1}{2}$ 100.27
RP#6	395	104.22	
			425 99.97
RP#7	454 $\frac{1}{2}$	104.56 $\frac{1}{2}$	
			399 100.57 $\frac{1}{2}$
RP#8	395 $\frac{1}{2}$	104.53	
			390 $\frac{1}{2}$ 100.62 $\frac{1}{2}$
	32.27		32.15 $\frac{1}{2}$
	458	105.20 $\frac{1}{2}$	493 $\frac{1}{2}$ 100.27
	440	104.67	558 99.09
	394 $\frac{1}{2}$	103.03 $\frac{1}{2}$	252 100.51 $\frac{1}{2}$

Oct 18 1912 Wm. S. Swann
MendozaMay 31 $\frac{1}{2}$ 1912100.30 $\frac{1}{2}$.01

99.10 .01

100.25 $\frac{1}{2}$.01 $\frac{1}{2}$ 100.05 $\frac{1}{2}$.02

100.30 .03

99.99 .02

100.58 .00 $\frac{1}{2}$ 100.62 $\frac{1}{2}$.00

55

59

Levels on RPs on Piers
along coast of Morro Bay

Oct 31 1912 Gust Swenson

448 152.76 14828

R 11 0.39 152.37

292 155.29

R 10 2.83 152.46

283 155.29

R 9 2.86 152.43

270 155.13

R 8 2.69 1/2 152.43 1/2

276 1/2 155.20

R 7 2.78 1/2 152.41 1/2

2.89 155.30 1/2

R 6 2.90 1/2 152.40

18.58 1/2

14.46 1/2 ✓

60
Levels on T.P.s on Crest Pairs.
Continued.

#6 277½ 155 17½ 15240

#5 275 15242½

289 15530½

#4 290 15240½

303 15544½

#3 304 15240½

277½ 15518

#2 280½ 15237½

606 15843½

321 15522½

1753

1470½

#1½

14
20
20
20
152
152

604 15238½

Levels on RP's on West Point
continued.

$1\frac{1}{2}$

28 $\frac{1}{2}$ 15520

15238 $\frac{1}{2}$

$2\frac{1}{2}$

285 15524

281

15239

$3\frac{1}{2}$

280 15522

282

15242

$4\frac{1}{2}$

282 15521

283

15239

$5\frac{1}{2}$

295 15520 $\frac{1}{2}$

275 $\frac{1}{2}$

15245 $\frac{1}{2}$

$6\frac{1}{2}$

297 $\frac{1}{2}$ 15536 $\frac{1}{2}$

301 $\frac{1}{2}$

15239

$7\frac{1}{2}$

295

15241 $\frac{1}{2}$

* 7 1/2 283 155.24 1/2 152.81 1/2

* 8 1/2 283 1/2 152.81

283 1/2 155.24 1/2

* 9 1/2 286 152.38 1/2

293 1/2 155.32

* 10 1/2 289 1/2 152.42 1/2

134 1/2 153.77

550 148.27 148.28 ✓

63

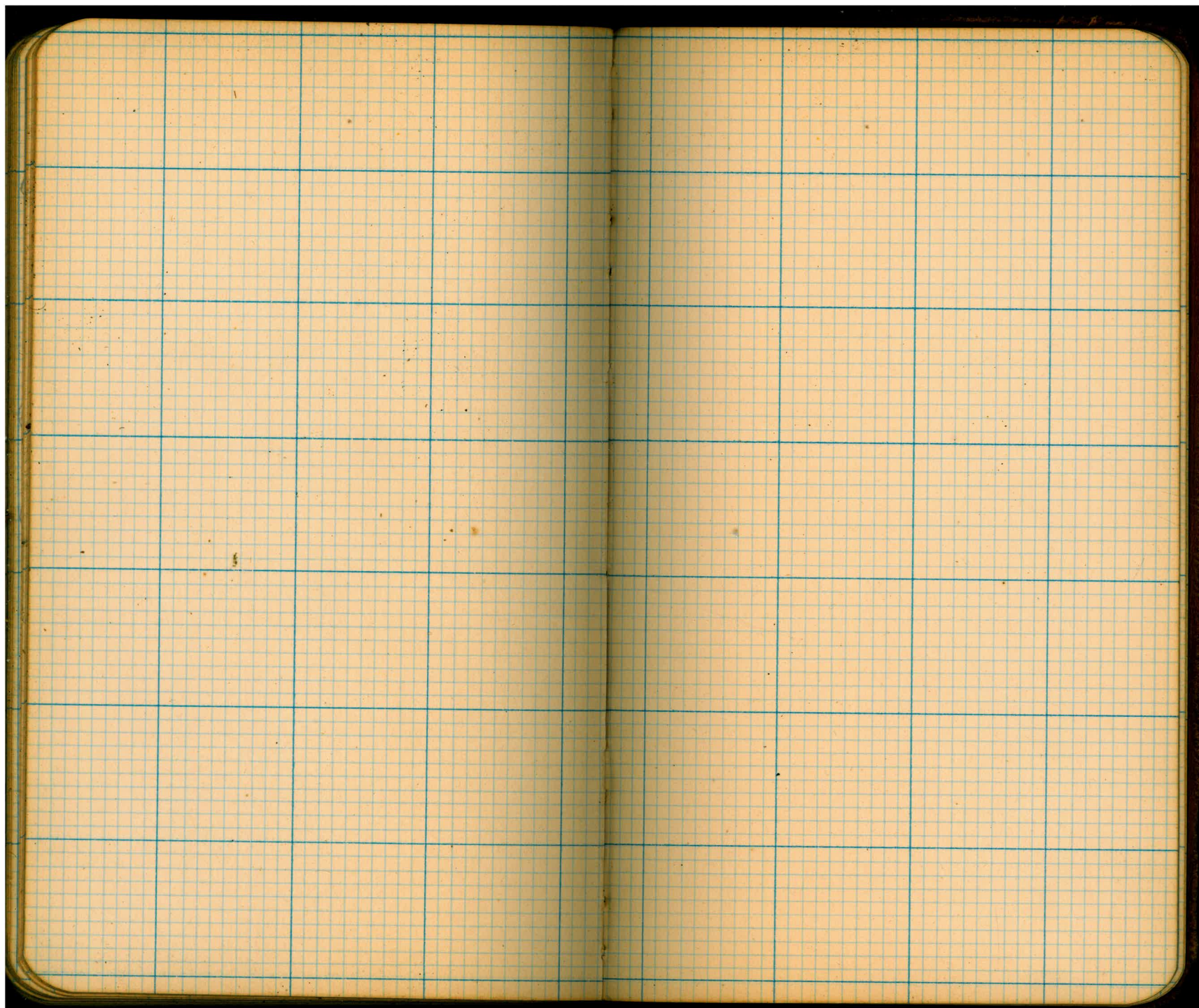
Natural Position of R.P.s on
Crest Pair 150' line Monna

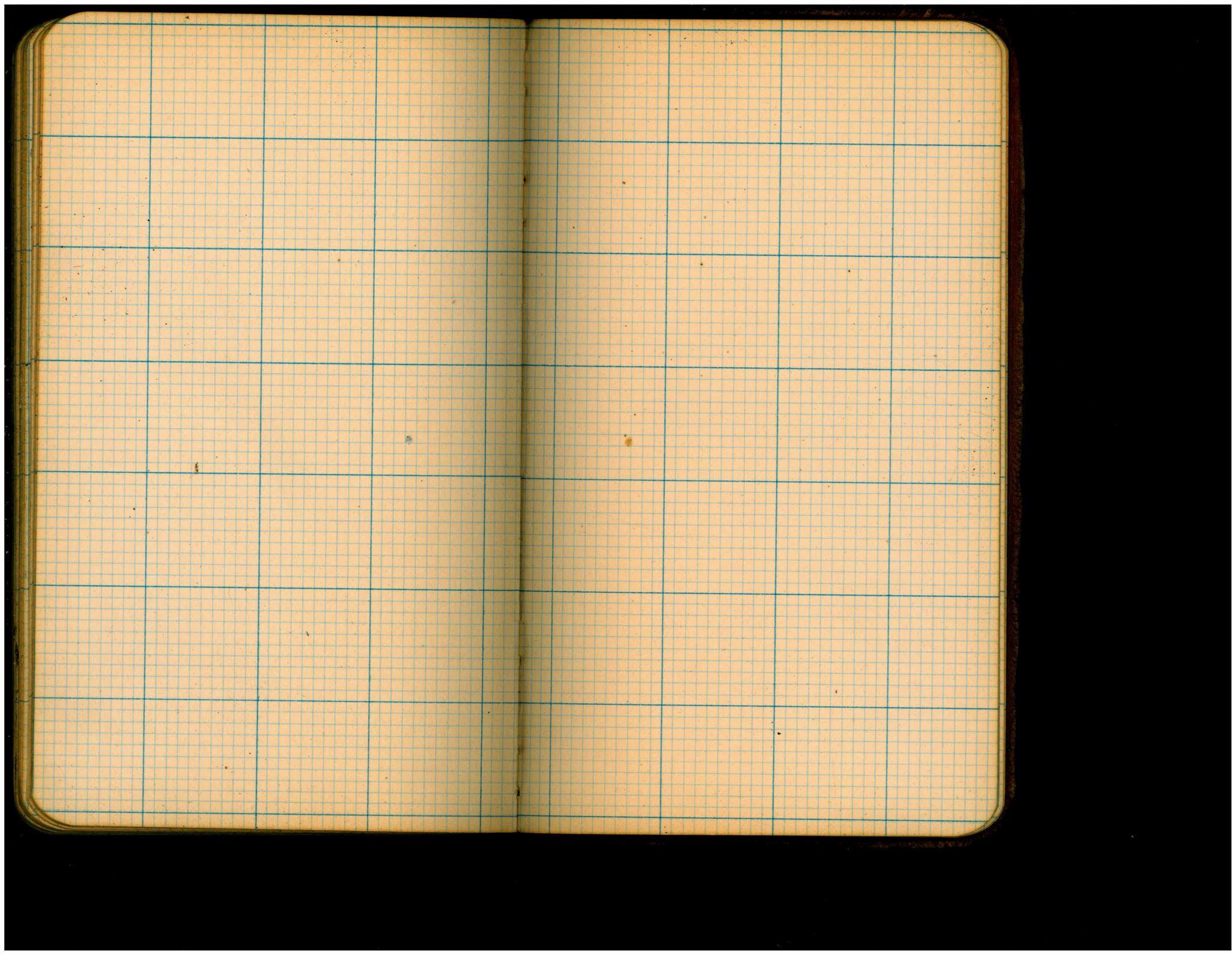
No	Dist 150' line to R.P.
"	7 $\frac{3}{4}$ "
10 $\frac{1}{2}$	7 $\frac{3}{8}$ "
10	7 "
9 $\frac{1}{2}$	6 $\frac{3}{16}$ "
9	6 $\frac{1}{2}$ "
8 $\frac{1}{2}$	6 $\frac{5}{16}$ "
8	7 $\frac{1}{4}$ "
7 $\frac{1}{2}$	7 $\frac{13}{16}$ "
7	8 $\frac{1}{8}$ "
6 $\frac{1}{2}$	8 $\frac{1}{8}$ "
6	7 $\frac{7}{8}$ "
5 $\frac{1}{2}$	7 $\frac{13}{16}$ "
5	8 $\frac{1}{4}$ "
4 $\frac{1}{2}$	8 $\frac{3}{8}$ "
4	9 "
3 $\frac{1}{2}$	8 $\frac{1}{2}$ "
3	7 $\frac{3}{8}$ "
2 $\frac{1}{2}$	8 "
2	8 $\frac{5}{16}$ "
1 $\frac{1}{2}$	8 "

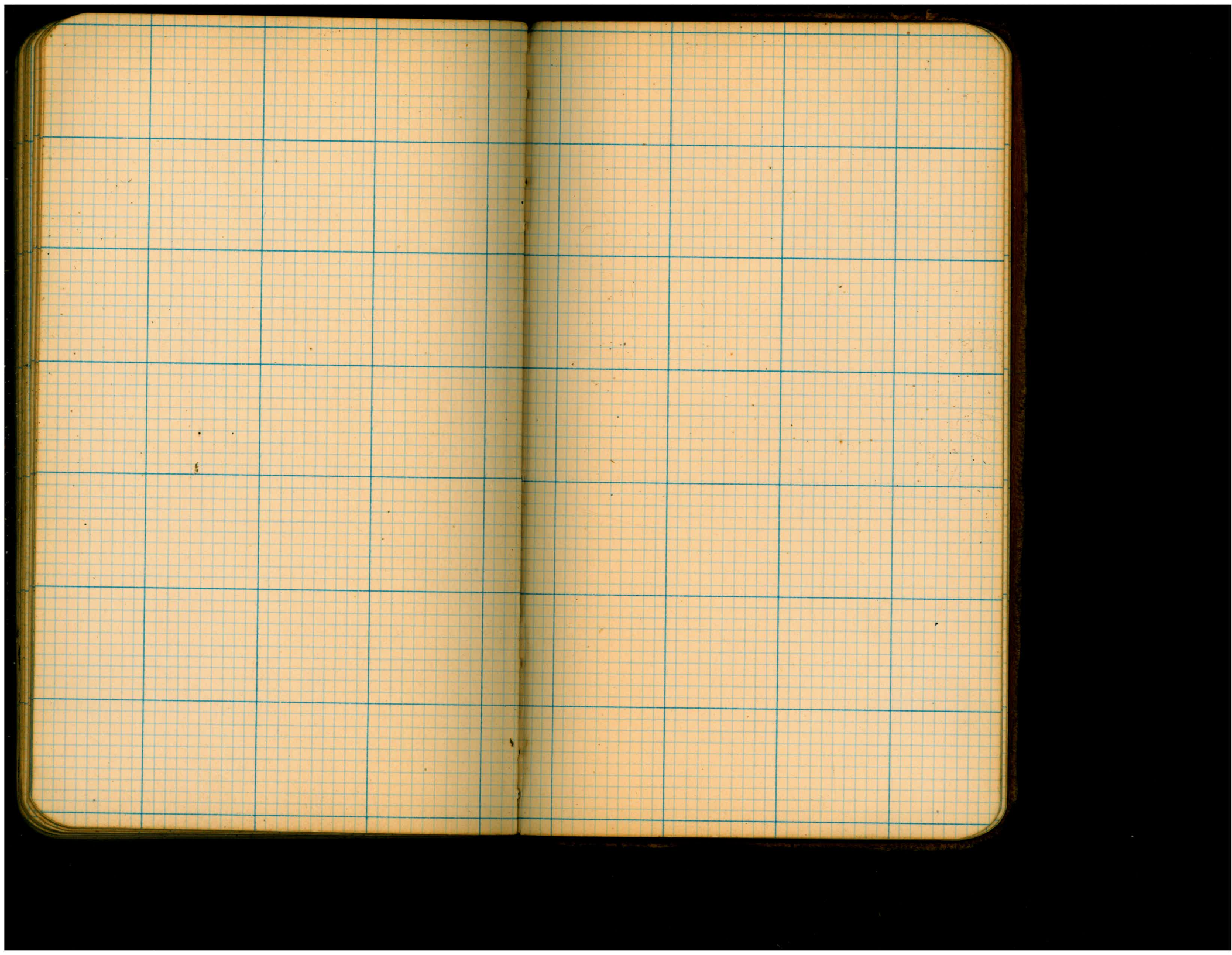
Nov 2 1912 Wm. S. Smiley

R.P.s are west of line

64







148.58

6.29

154.87

8.99

145.58

0.64

145.72

136

9.72

105.58

3.17

108.75

74

0+10 Spillway wall grade.

2+00 = 190 @ 3 1/2% @ 4 1/2%

0+50

2+00 = 150'

4.16 2/3
350
66 2/3

500 2/3
66 2/3
4' 3 3/4

150) 1000
900
1000

500
17
4' 3 3/4 = 4' 10"

467
17
4' 5 1/2 = 4' 6"

450
17
4' 5 1/2 = 4' 4"

433
16
4' 7 1/2 = 4' 2 1/4"

350
175
100
150) 6.25
6.00
250
112
1000
100

66 2/3
25
330
132
16 2/3
166 2/3

Grade = 4.16 2/3%

Grade to top of wall

Sta	Grade to top of wall
0+50	5' 0"
0+75	4' 10"
1+00	4' 8"
1+25	4' 6"
1+50	4' 4"
1+75	4' 2"
2+00	4' 0"

Bags 130 Level

No.	
2 1/2	W 1/4"
5 1/2	W 1/4"
6	W 1/16"
6 1/2	E 5/16"
7	No Mark.
7 1/2	Do
8	E 2 1/33"
8 1/2	E 1/4"

Wood at Malomys.

47. ft	5.3 ft high
16.6 ft	3.0 ft "
76.7 ft	6.5 " "
58. ft	4.5 " "

31 chords

21" Top. stem $2\frac{1}{2}$ " Total $23\frac{1}{2}$ "

$1\frac{5}{8}$ " water began to flow.

$3\frac{1}{2}$ " (5,000,000 Gals) @ 4:10 PM

16"

4:55 P.M.

14828
656

15484

Lake -- 50.29

3 P.M. 2/29/12

100510
+1505

102015
-11110

90905
+1000

91905
-11090

80815
+6

81975

-10635

70890

7535

76190

-6290

69900

+6010

75910

-6730

69180

+11

80180

-430

79750

11175

90925

11000

101985

90905

11000

101905

1960

100505

2.64
 2.28 35
 2.13 .16
 1.76 37
 88 88

150
 750
 370

083

323

96

892

775

1015

473

2373

503

178

1793

263

1130

3"
 8"
 7"
 12"
 30

14828
 124
 14952
 14350
 907

2877

20=18
 30 15
 33

197
 477
 626
 03
 23

45
 68
 93
 113
 120

46
 38
 38
 28
 15

14728
 19

148.47

431

144.16

584

2.92

10.92

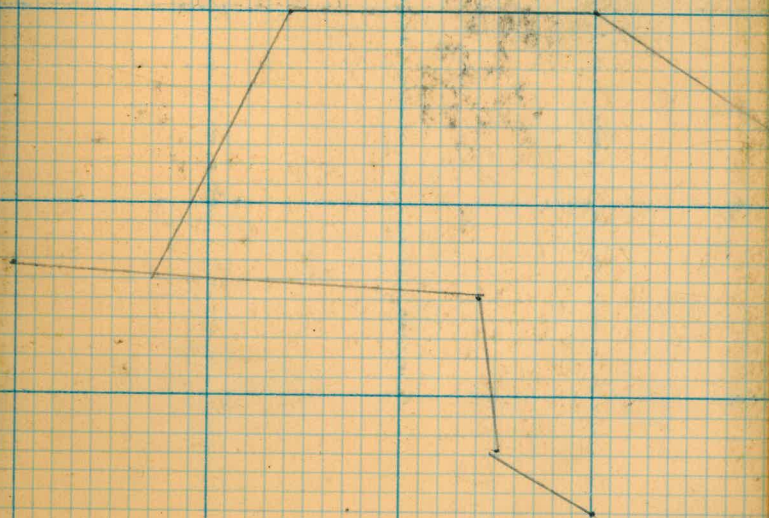
14827
 517

14330

670

335

1135



AW
CS

Tower 2-7-12

Width across slab (outside) 20

" " " " 8.80

Thickness of slab 10"

4.80 Length side inside polygon

A.25 " " outside

No. holes outside 13

" " " " inside 6

4.4 Ctr. of hole to outside edge

A.25 " " " " inside edge

Offset 2' 10" up on

23.5

22.5

1325

16

12

6

5

40

1024 = ~~10481~~

10051.0

1505

102015

11110

90905

14

132

16 x 18 288 B 2
14 x 12 168 } 456. 22
324



30 x 9

18 x 11 = 324

28 x 8 x 2
28 x 2 x 2

3 2
24
26
11
133
35
3
271
244
1015

2241
298
222
244
148
296

3
5

501
2908
240901
2925
15001