

294

W294



TRISTIC BOOK

LEVEL BOOK

No. 330 F

85

294

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

**MICROFILMED**

JAN 11 1966

INDEX

Pages

O.R. S.D. 2nd. Main Pipe Line  
 Location of Grade intersection  
 with ground line to determine  
 Trestle lengths.

Sta 0100 to Sta. 855.

Layout & profile for trestle piers  
 from Lantana to

Construction data trestle "38	10
Location " " 39	11
" " " 38	12
" " " 37	13
" " " 36	14
Ties to exist pipe "	37 15
" " " " "	36 16
Construction data "	39 17-18
Loc. & Const. " "	35 19-20
" " " "	31 21-22
" " " "	33 23-24
" " " "	32 25-26

O.R. S.D. 2nd. Main Pipe Line  
 Loc. of trestles from Otag  
 Filter plant. to Lantana.

B.M. 1	1.80	402.36	400.56	
1704 84+96		10.36	392.0	grade
1+57.4		10.36	392.0	"
B.M. 3	1.42	342.43	341.01	
80+ 101+58		6.11	336.32	grade
11+02.4		6.15	336.28	"
B.M. 7	4.03	348.15	344.12	
29+14.1		10.15	338.00	grade
29+45.2		10.15	338.00	"
B.M. 9	2.48	366.70	364.22	
33+05.9		12.70	354.00	grade
33+23.0		12.70	354.00	"
B.M. 14	4.90	345.19	340.79	
60+39.2		5.19	340.00	grade
60+68.7		5.19	340.00	"
B.M. 16	6.30	320.22	313.92	
67+41.7		8.22	312.00	grade
67+64.4		8.22	312.00	"

See page 11 to

Hill 11/27/29  
 Elliot clearwarm  
 Simpson  
 Walton

Nail in transformer pole Otag Filter plant  
 Trestle "1  
 " "  
 Nail in sill of center bent of trestle  
 Trestle "2 (N.G. - Ewb.)  
 Trestle "2  
 Nail in sill of trestle  
 Trestle "3  
 " "  
 Nail in sill of trestle  
 Trestle "4  
 " "  
 Nail in sill of trestle  
 Trestle "5  
 " "  
 Nail in sill of trestle  
 Trestle "6  
 " "

(cont.)

B.M. #18	2.86	346.18		343.32
71+96.8			7.18	339.00 grade
72+39.8			7.18	339.00 "

Nail in sill of trestle  
Trestle #7  
" "

B.M. #20	5.02	337.94		332.92
81+43.2			7.94	330.00 grade
81+58.4			7.94	330.00 "

Nail in sill of trestle  
Trestle #8  
" "

B.M. #23	3.48	331.37		327.89
92+89.2			3.37	328.00 grade
93+32.4			3.37	328.00 "

Nail in sill of trestle  
Trestle #9  
" "

B.M. #25	1.40	361.74		360.34
98+34.5			9.74	352.00 grade
98+65.5			9.74	352.00 "

Nail in sill of trestle  
Trestle #10  
" "

B.M. #27	3.48	320.07		316.59
104+75.5			8.07	312.00 grade
105+24.5			8.07	312.00 "

Nail in sill of trestle  
Trestle #11  
" "

B.M.	1.73	391.80		390.07
T.P.			12.33	379.47
	0.80	380.27		
			13.1	367.20
	2.00	369.20		

Air valve 60' R. 108+15

369.20

110+02.7 5.20 364.00 grade

Trestle #12

110+11.5 5.20 364.00 "

" "

For Trestle at 112+60 see page 9.

B.M. #30 3.11 338.25 335.14

Nail in sill of trestle

119+60.3 8.25 330.00 grade

Trestle #13

119+76.0 8.25 330.00 "

" "

Same crew 11/29/29 - clear

B.M. #33 6.31 371.35 365.04

Nail in sill of trestle

136+32.9 3.35 368.00 grade

Trestle #14

136+71.8 3.35 368.00 "

" "

B.M. #45 0.37 393.61 393.24 grade

Air valve

T.P. 13.07 380.51

0.51 381.05

251+11.2 12.30 368.75

Trestle #15

251+78.5 11.80 369.25

"

B.M. #48 0.38 392.81 392.43

Air valve

T.P. 12.60 380.21

1.95 382.16

T.P. 11.70 370.46

0.80 371.26

260+03.0 6.26 365.00

Trestle #16

260+51.5 2.76 368.50

"

B.M. 50 0.00 392.96 392.96

T.P. 12.80 380.16

0.33 380.49

T.P. 12.90 367.59

1.55 369.14

270+31.9 12.00 357.14 2

270+72.6 12.00 357.14

B.M. 77 2.02 63.62 61.60

183+12 9.8 53.82

183+67 8.36 55.26

11.3 52.3

Air valve

Trestle # 18

" "

Nail in N.E. wing wall Banita bridge

Trestle # 19

Not constructed

Water surface 11/29/29

Hill 11/30/29 clear  
Elliot  
Simpson  
Watton

Beginning of Lantana

BM 123 5.75 325.99 369.74

Air valve

T.P. 12.76 362.73

0.83 363.56

T.P. 12.51 351.05

0.45 351.50

T.P. 12.61 338.89

0.59 339.48

T.P. 12.85 326.63

0.92 327.55

12.83 314.72

1.00 315.72

792+892 7.72 308.00

Trestle #39 ✓

793+305 7.72 308.00

"

BM 119 7.40 377.93 370.53

Air valve

T.P. 12.76 365.17

0.72 365.89

T.P. 13.05 352.84

1.31 354.15

T.P. 12.87 341.28

0.07 341.35

T.P. 12.73 328.62

0.83 329.45

767+827 5.75 324.00

Trestle #38 ✓

768+526 324.00

"



B.M. #114			287.40	
	0.73	290.13		
T.P.			12.87	277.26
	0.87	278.13		
T.P.			12.85	265.28
	0.89	266.17		
715+70.5			10.12	256.05 grade
716+35.5			10.17	256.00 "
B.M. #110				269.54
	3.70	273.24		
T.P.			12.91	260.33
	1.24	261.57		
T.P.			12.38	249.19
	1.18	250.37		
691+00			4.77	245.60 grade
691+99.7			4.77	245.60 "
	12/2/29 same crew			
B.M. #101	0.34	246.05		239.71
621+33			3.18	242.87
621+99.9			3.18	242.87
B.M. #100	0.77	379.81		379.37
614+58.5			9.14	370.67
614+82.3			9.19	370.62

Spike in gum tree

Trestle #37 ✓

"

Top A.V. Rt 688+63

Trestle #36 ✓

"

Bolthead N.E. car. blowoff valve

Trestle #35 ✓

Air valve

Trestle #34 ✓

B.M. '99	2.15	383.95		381.80	
611+70.2			12.71	371.24	grade
7612+18.3			12.81	371.14	"
B.M. '99	0.18	333.13		332.95	
607+05			6.86	326.27	grade
715, 607+21			6.00	327.13	"
716, 607+30			5.42	327.71	"
608+09			1.44	331.69	"
B.M.					
B.M. '99	2.51	340.46		332.95	
T. 605+70.2			12.60	327.86	grade
605+79			13.00	327.10	"
T.					
B.M. '96	13.05	276.80		268.75	
691 T.P.			0.31	276.46	
691	5.70	282.10			
595+06			5.82	276.31	grade
B.M. 595+22.1			3.79	278.37	"
621					
621 B.M. '96	1.84	265.59		263.75	
592+15.2			5.79	260.10	grade
B.M. 592+63.7			5.79	260.10	"
0.1					
514					

Air valve  
Trestle #33

Spike in trestle  
Trestle #31 ✓  
" }  
Trestle #32 ✓  
" } check

Spike in trestle  
Trestle #30 ✓

Blowatt valve

Trestle #29

Blowatt  
Trestle #28 ✓

cut out 11/16/49  
check on mile book  
of Jones

B.M. 92	1.36	345.17	343.82	
T.P.			12.31	332.80
	0.82	332.18		
T.P.			10.33	322.85
	0.18	323.33		
571+00			6.58	316.75 grade
571+30			6.97	316.36 "
B.M. 91	0.68	355.15	351.77	
T.P.			12.97	342.78
	0.96	343.44		
T.P.			12.58	330.86
	3.98	334.54		
567+27.5			2.20	332.64 grade
567+77.2			4.84	330.00 "
B.M. 89	0.83	271.64	270.81	
560+31			5.71	265.83 grade
560+70			4.53	267.11 "

Nail in stringer of trestle

Trestle # 27 ✓

"

Air valve

Trestle # 26 ✓

Nail in blow off box

Trestle # 25 ✓

"

)

B.M. 87	0.81	275.53		274.72	
549+38.5			2.96	273.07	grade
549+92			1.18	274.35	"

Nail in sill of trestle

Trestle # 24 ✓

"

B.M. 87	6.76	281.48		274.72	
548+64			6.00	275.48	grade
548+76			7.48	274.00	"

Trestle # 23 ✓

"

B.M. 82	3.47	178.82		175.35	2
516+15			8.47	170.37	grade
516+ <sup>93</sup> / <sub>2</sub>			8.48	170.29	"

Nail in sill of trestle

Trestle # 22 ✓

"

B.M. 78	1.15	162.41		161.26	
T.P.			11.84	150.57	
	0.73	151.00			

Iron pipe

493+41			8.7	142.3	grade
493+67			7.4	143.6	"
492+125			10.32	140.68	"
492+51			10.18	140.82	"

trestle } # 21 ✓

"

"

"

} # 20 ✓

B.M. 29				396.93	
	0.0	396.93			
112+48			12.93	384.00	grade
112+98.2			12.93	384.00	"

O.R.-S.D. 2<sup>nd</sup> M.R.L.

Elevations in Bottom of excavations  
for Piers at Trestle #3836

	7.95	325.34	317.39 - B.M. <sub>39</sub> 73	on sill of W.S. Pipe trestle
Pier #1	767+90 <sup>5</sup>	7.6	317.7	Bottom
Pier #2	768+05 <sup>5</sup>	14.0	311.3	"
Pier #3	768+20 <sup>5</sup>	12.3	313.0	"
Pier #4	768+35 <sup>5</sup>	11.2	314.1	"
Pier #5	768+50 <sup>5</sup>	6.9	318.4	"
	0.89	324.50	check	

Elevations on top of Paired Footings, Piers #2+3

	9.71	327.10	317.39 = B.M. on Sill of Trestle	
Top of concrete Footing	Pier #2	13.9	313.2	
" " "	"	Pier #3	12.1	315.0

10

For location Data  
see page 12

clear 3/12/30  
+  
warm

Hill  
Elliot  
Simpson

Left

4

Right

11

Otay - S.D. 2nd M.P.L.  
Layout & section of Piers-Trestle <sup>37</sup> 39

				Grade
	0.0	317.90	317.9	
	2.8	311.90	309.10	324.0
792+89.2		3.9	308.0	
792+94 Pier #1		5.1	306.5	
793+09 " 2		5.9	306.0	
793+24 " 3		4.6	307.3	
793+30.5		3.9	308.0	

Page 792+60

308.5			308.0	306.4
<u>2.3</u>				<u>5.5</u>
4				4
307.5			306.5	305.2
<u>1.1</u>				<u>6.7</u>
4				4
306.6		306.2	306.0	304.9
<u>6.3</u>		<u>5.6</u>		<u>7.0</u>
4		2		4
308.3			307.3	306.9
<u>3.6</u>				<u>5.1</u>
4				4
309.0			308.0	308.0
<u>2.9</u>				<u>3.9</u>
4				4

Note Make foundation grade  
2.0 below surface of  
lowest point.

For construction data  
see page #18

clear  
warm 3/12/30

Parker  
Converse  
Hill  
Elliot  
Simpson

12

Otago - S.D. 2nd M.P.L.

Layout & profile at piers - Trestle 38

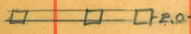
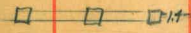
	0.00	329.4	329.4	
Intersect.				
767+82.4 ground & grade line	5.4	324.0		Proposed Foundation Elev.
+90.5 Pier "1	8.6	320.8	319.0	
768+05.5 " 2	12.8	316.6	312.0	
+20.5 " 3	12.2	317.2	313.2	
+35.5 " 4	11.3	318.1	315.1	
+50.5 " 5	6.4	323.0	320.0	
Intersect.				
+53.6 ground & grade line	5.4	329.0		

Note Ground about level transversely.

Elev. exist woodstave pipe at middle of trestle = 329.0 (flow line)

Peg 767+68

8"x12" battered concrete block footing - exist. structure



Otago - S.D. 2nd M.P.L.

768+53.6	intersec. ground & grade line	
Pier "5	768+50.5	El. 320.0
		7.2
Pier "4	768+35.5	El. 316.0
		5.6
Pier "3	768+20.5	El. 313.5
		4.9
Pier "2	768+05.5	El. 312.0
		2.8
Pier "1	767+90.5	El. 318.0
		2.0
767+82.4	intersec. grade & ground line	

See page # 10 for construction data

Clear 3/12/20  
Warm

Parker  
Conraro  
Hill  
Elliot  
Simpson

13

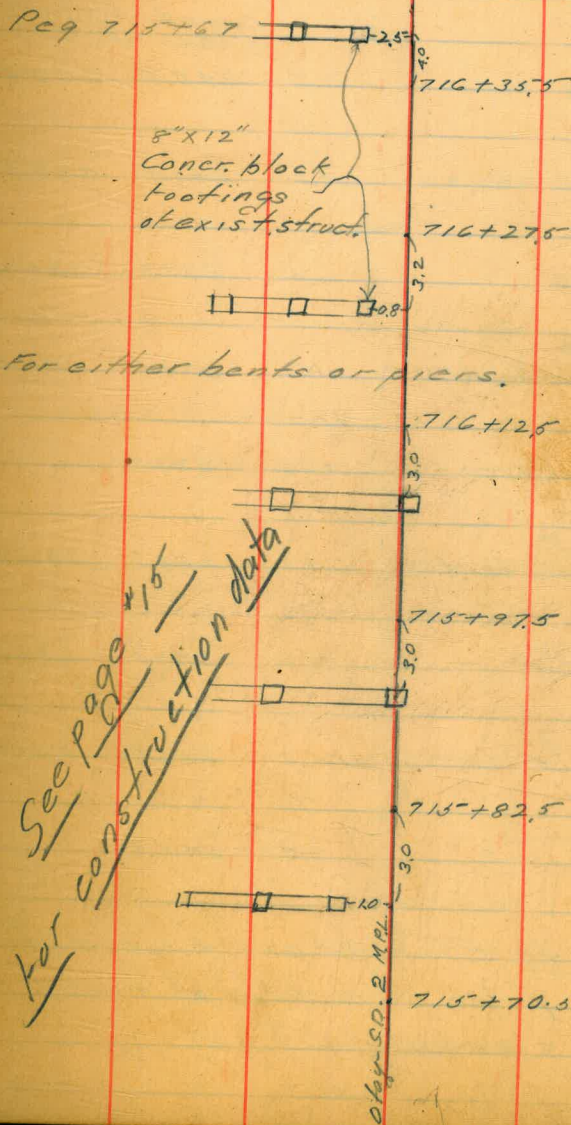
Otago S.D. 2nd M.P.L.

Layout & Profile for bents & piers - Trestle 37

				Ground Elev.	Foundation Elevation
0.0	258.3			258.3	
715+70.5	Intersection ground & grade line	2.3		256.0	
+82.5	Pier 1	1	7.2	251.1	248.1
+97.5	Trestle bent #1	2	11.7	246.6	243.0
716+06	Bot. of draw		14.2	244.1	
716+12.5	Trestle bent #2	3	11.9	246.7	243.0
+27.5	Pier #2	4	6.6	251.7	248.7
+35.5	Intersec. ground & grade line	2.3		256.0	

~~Note If concrete piers are used instead of trestle bents #1 & #2, make found. at elev. 243.0~~

Note Elev. of exist wood stave pipe at middle of trestle = 264.0 flow line.



For either bents or piers.

See page 15  
for construction data

Otago S.D. 2 M.P.L.



Clear  
to  
Worm 3/12/30

Parker  
Converse  
Hill  
Elliot  
Simpson

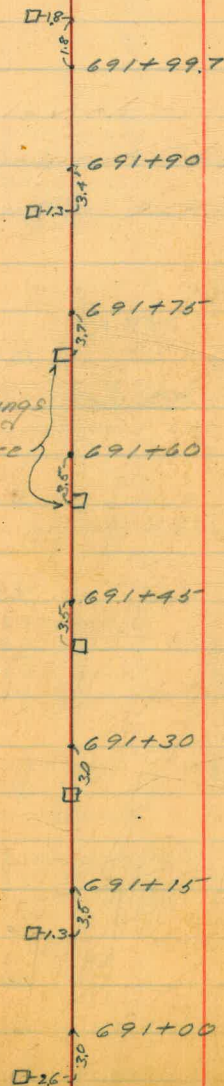
Otago S.D. 2nd. M.P.L.  
Profile for bents & piers - Trestle <sup>37</sup> ~~36~~

	0.1	249.3	249.2	Proposed Foundation Elevation
			Ground Elev.	
691+00 Pier <sup>o</sup> 1	3.7	245.6	242.5	
+15 " 2	7.9	241.7	238.5	
+30 " 3	11.4	237.9	235.0	
" 4				
+45 Trestle bent <sup>o</sup> 1	14.9	234.4	230.5	
+50 Bot. of draw	15.6	233.7		
Pier <sup>5</sup>				
+60 Trestle bent <sup>o</sup> 2	14.6	234.7	230.5	
" 6				
+75 Pier <sup>o</sup> 4	10.2	239.1	236.5	
" 7				
+90 " 5	5.7	243.6	241.0	
Intersec. +99.7 ground & grade line	3.7	245.6		

Page 690 T&E

Concr. block footings  
of exist. structure

See page 16 for further  
data on construction



Note Elev. of exist. wood stave  
pipe at middle of trestle  
= 254.0 (flow line)

3/20/30 clear  
warm

Converse  
Hill  
Elliot  
Simpson

259.03  
1.34  
260.37  
56  
4.37  
51  
309

15

Otago S.D. 2nd M.P.L.  
Layout of piers, trestle #37, with  
ties to ~~4~~ of 1st M.P.L. & reference  
points.

5/27/30  
Simpson  
Seber  
Reimann

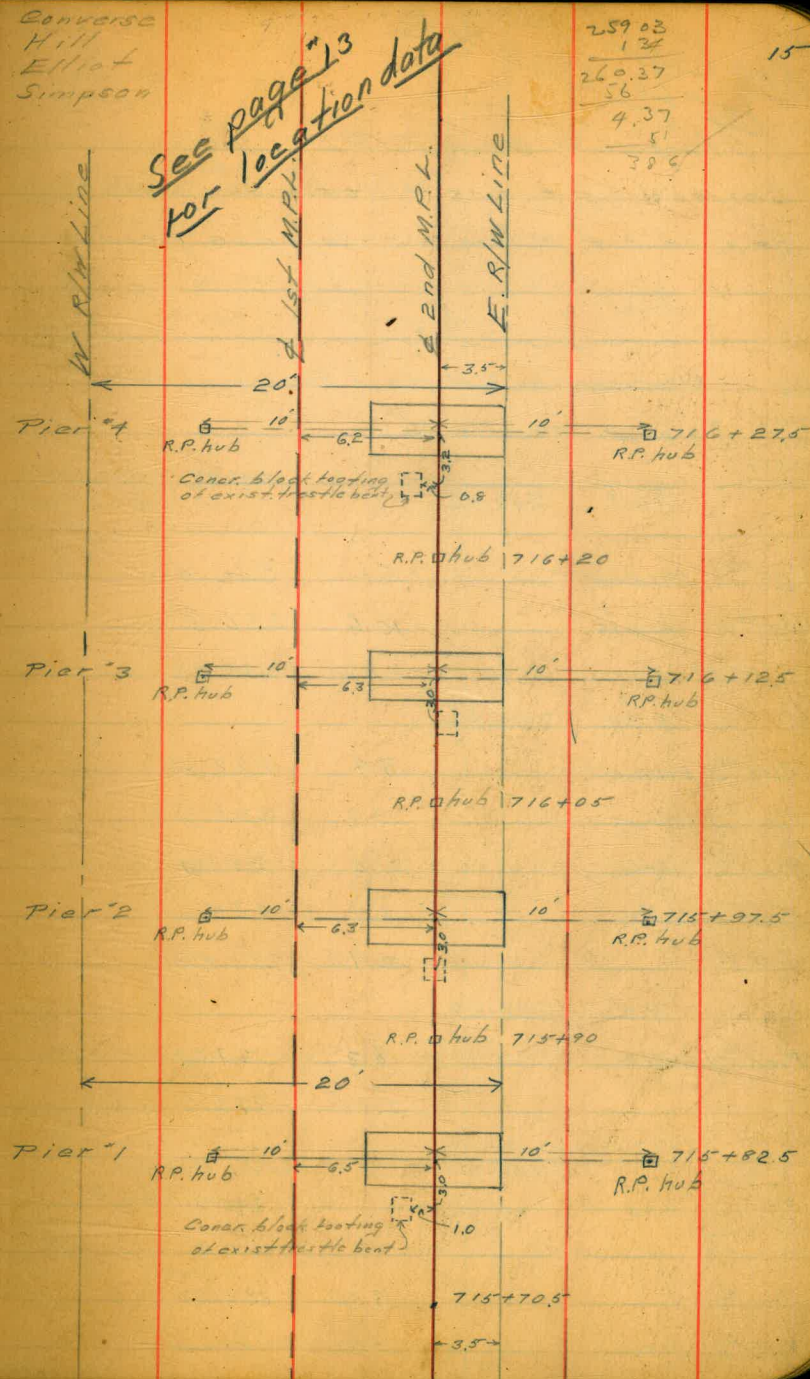
Elevations in Patterns of Excavations  
For Piers of trestle #37.35

			259.03 = B.M. on Sill of Trestle	
	0.62	259.65	12.16	247.49
	4.85	252.34		
Pier #1	715+82 <sup>5</sup>	5.5	246.8	6 <sup>7</sup> X 3 <sup>1</sup>
Pier #2	715+92 <sup>5</sup>	9.6	242.7	12 X 1 X 3 <sup>5</sup>
Pier #3	716+12 <sup>5</sup>	10.1	242.2	12 X 0 <sup>2</sup> X 3 <sup>2</sup> 7 <sup>0</sup> X 4 <sup>25</sup>
Pier #4	716+27 <sup>5</sup>	4.7	247.6	12 X 1 <sup>2</sup> X 3 <sup>2</sup> 7 <sup>0</sup> X 2 <sup>2</sup>

5/29/30

Elevations on top of Poured Footings  
259.03 = B.M. Sill of Trestle

Pier #1	1.34	260.37	9.83	250.54
Pier #2			14.30	246.07
Pier #3			15.12	245.25
Pier #4			10.10	250.27



See Page 14  
for location data

Olay S.D. 2nd M.P.L.

Layout of piers, trestle <sup>34</sup>, with ties  
to 4 of 1st M.P.L. & reference points.

3/20/30 Converse  
clear Hill  
Worm Elliot  
Simpson

6/3/30 Elevations in Bottoms of Excavations For

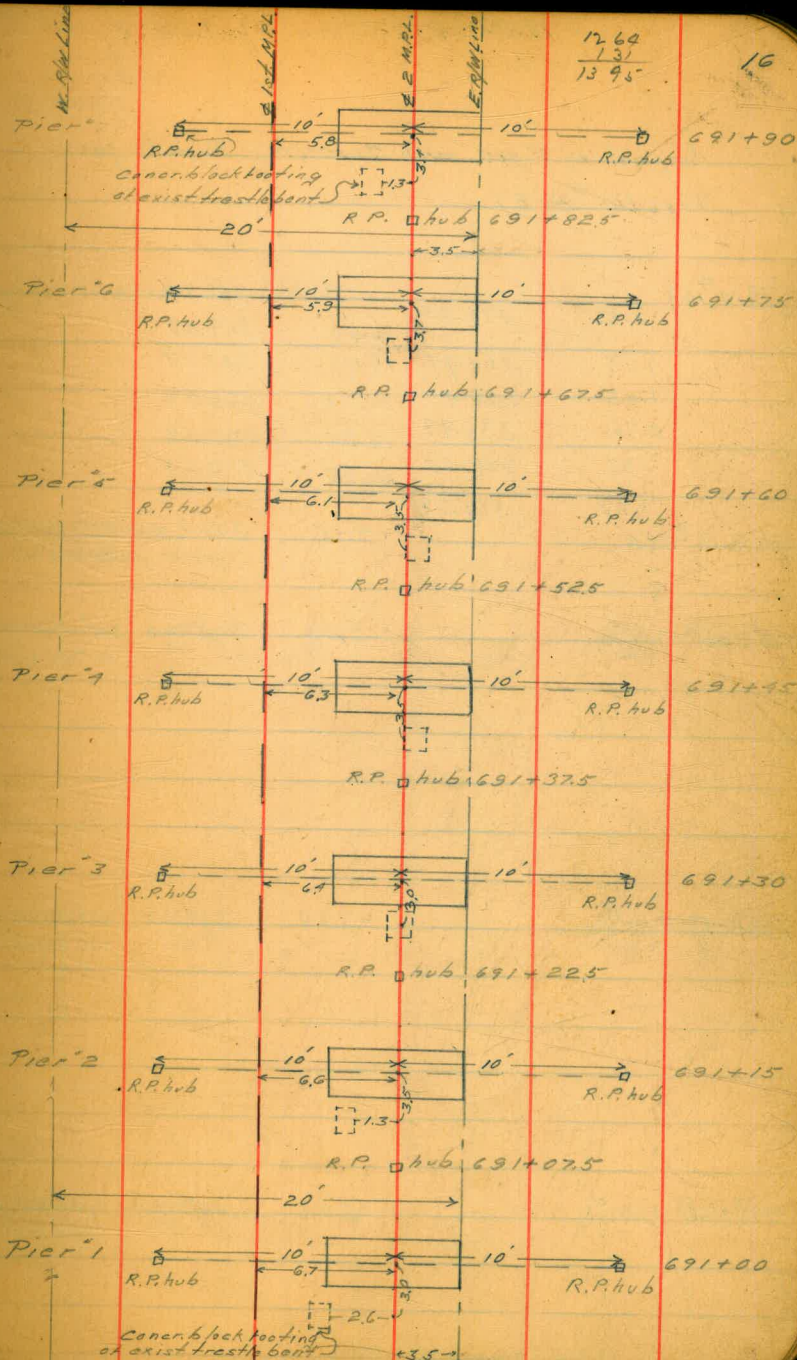
Simpson  
Saber  
Remmen  
Piers at Trestle #34  
5.28 247.06 241.78 = B.M. on Sill  
of old Trestle

Pier #1	691+00	5.1	242.0
Pier #2	691+15	10.6	236.5
T.P.		8.98	238.08
	4.34	242.42	
Pier #3	691+30	9.9	232.5
Pier #4	691+45	13.9	228.5
Pier #5	691+60	11.0	231.4
Pier #6	691+75	6.9	235.5
T.P.		2.94	239.48

	9.21	248.69	
Pier #7	691+90	8.3	240.4
	2.58	246.11	check on Grade 101

6/9/30 Elevations on top of Poured Footings.  
Simpson  
Saber  
Remmen  
7.34 249.12 241.78 = B.M.

Pier #4		18.75	230.37
Pier #5	691+60	15.91	233.21



April, 4, 1930

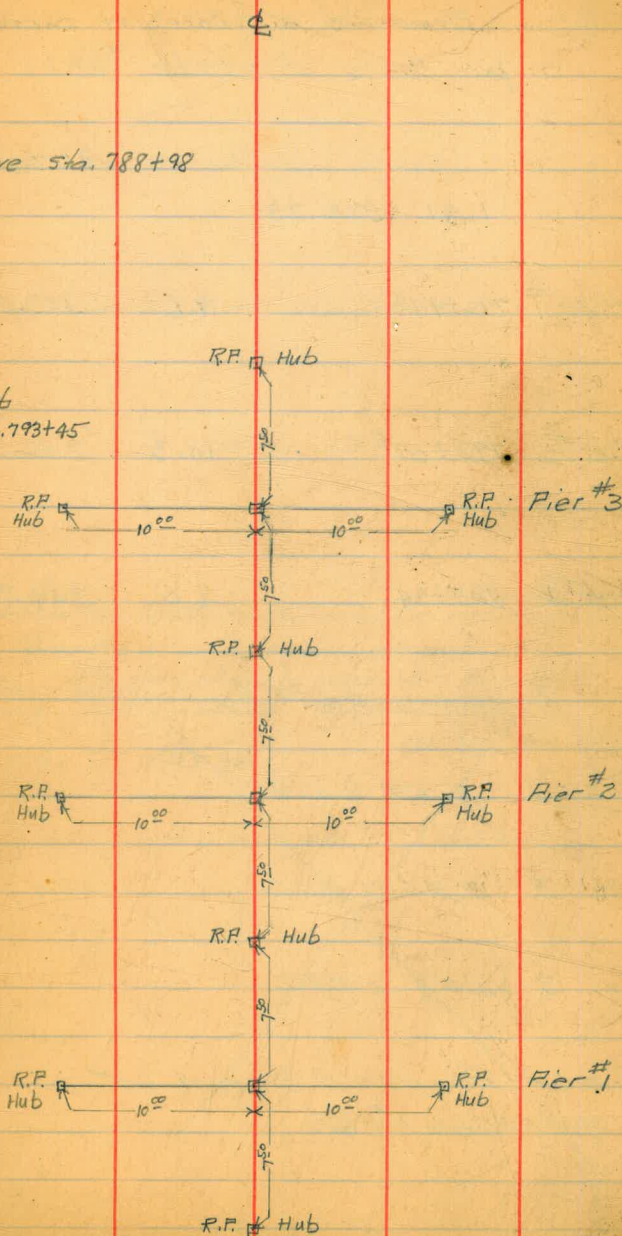
Simpson  
Jacobszorn  
Bailey

clear and warm

17

Lay-out of Piers and Reference Points for  
Trestle #39-37

B.M. #123	2.51	372.25	369.74		
	1.15	360.43	359.28		
	1.05	348.42	347.37		
	0.76	336.48	335.72		
	0.92	324.50	323.58		
	1.63	314.28	312.65		
set B.M. #128A		2.66	311.62	set B.M. Hub Beside old mile	with nail in top Post #15 - 15' W. Sta. 793+45
793+24 <sup>o</sup> Pier #3		-6.28	308.00	set Hub with to Pipe Grade	nail in top about 6' W. of $\Phi$ pier
793+09 <sup>o</sup> Pier #2		-7.28	307.00	set Hub with 1.00 Below Pipe	Nail in Top Grade, about 6' W. of $\Phi$ pier
792+94 <sup>o</sup> Pier #1		-6.28	308.00	set Hub with Pipe Grade,	nail in top to about 6' W. of $\Phi$ pier.



Elevations in Bottom of excavations  
for Piers at trestle #3937

			311.62
	1.31	312.93	
Pier #1	792+94 <sup>o</sup>	9.6	303.3
Pier #2	793+09 <sup>o</sup>	10.3	302.6
Pier #3	793+24 <sup>o</sup>	8.0	304.7

Dimensions base of Piers

Pier #1	2.57 x 5.99
" 2	2.80 x 6.22
" 3	2.08 x 5.32

Top of Piers - 0.83 x 4.25  
Bottom 1' 6"

5/1/30  
Simpson  
Moore  
Remmen.

For location data  
see page 11

B.M. 15' west sta. 793+45<sup>o</sup> (nail in hub)

Bottom of excavation - excavation measures - 3<sup>o</sup> x 6<sup>o</sup>

" " " - " " - 3<sup>o</sup> x 6<sup>o</sup>

" " " " " - 3<sup>o</sup> x 6<sup>o</sup>

5/4/30  
Simpson  
Sober  
Remmen

Elevations in Bottom of excavations  
Dig Deeper since first elevs were taken

	1.72	313.34	311.62 B.M. 15' w/ 793+45
Pier #1		10.1	303.2
Pier #2		10.8	302.5
Pier #3		8.6	304.7

Lay-out of Piers and Reference Points  
for Trestle #3533

B.M. #101

8.56

248.27

239.71

621+48<sup>±</sup> Pier #2

6.4

241.9 = Ground El. at

☉ of Pier

4.40

243.87 = set Hub with  
nail in top 1.00  
Above pipe Grade  
about 6' East of  
☉ Pier.621+33<sup>±</sup> Pier #1

6.5

241.8 = Ground El. at ☉

Pier

5.40

242.87 = set Hub with  
nail in top to  
pipe Grade  
about 6' East  
of ☉ pier

See Next Page

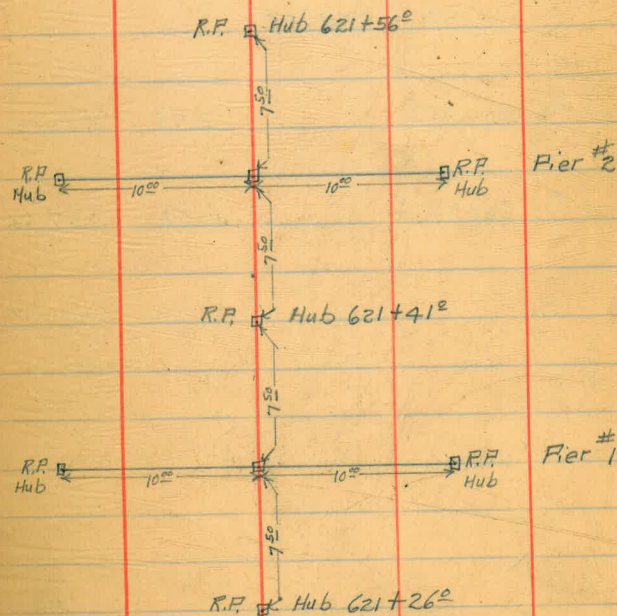
Copied - 4/7/30 - W.H.S.

April, 4, 1930  
Simpson  
Jacobszoon  
Bailey

Clear and Warm.

19

Bolt head N.E. Cor. B.O. valve 23 Rt. Sta. 621+26



6/12/30  
Simpson  
Soper  
Remmen

Elevations in Bottoms of excavations  
for piers at Trestle # 2533

cloudy and cool

	4.54	244.25	239.71 = B.M. # 101	on B.O. Rk. Sta. 621+26
Pier #1	621+33 <sup>±</sup>	8.75	235.50	3 <sup>3</sup> x 6 <sup>2</sup>
Pier #2	621+48 <sup>±</sup>	6.59	237.66	3 <sup>3</sup> x 6 <sup>2</sup>
		0.38	243.87 = check	on 1' above grade point.

O.R.S.D. 2<sup>nd</sup> main Pipe Line

Lay-out of Piers and Reference Points  
for Trestle #3432

B.M. #

1.37

380.74

379.37

614+77° Pier #2

10.8

369.9 = Ground El.

at  $\phi$  of Pier #2

9.11

371.63 = Set Hub  
1.00 Above

with nail in top  
Pipe grade about  
7' East of  $\phi$  Pier

614+62° Pier #1

11.1

369.6 = Ground El.

at  $\phi$  of Pier #1

9.08

371.66 = Set Hub  
1.00 Above

with nail in top  
Pipe grade about  
7' East of  $\phi$   
Pier

370.36

52

378.88

April, 4, 1930

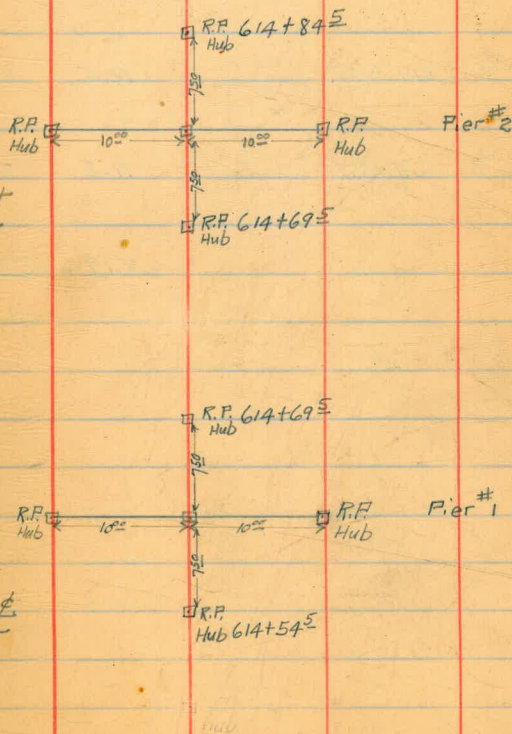
Simpson  
Jacobszoon  
Bailey

clear and warm.

21

$\phi$

Top of Air valve 33' Ft. of sta. 614+70



Copied 4/7/30 W.H.S.



6/13/30  
Simpson  
Jafer  
Remmer

Elevations in Bottoms of excavations  
for piers at Trestle #32

	0.47	379.84	379.37 = B.M. on	A.V. 33' Rt. sta, 614+70
Pier #1	614+62'	12.5	367.3	
Pier #2	614+77'	11.8	368.0	
		8.19	371.65	check on Hub 1' above pipe grade

Layout of Piers and Reference Points for  
Trestle #3331

B.M. #99			381.80	
	210	383.90		
		12.48	371.42	
	3.89	375.31		
612+12 <sup>o</sup> = Pier #3	7.0	368.3 = Ground El. at	of pier #3	
	4.15	371.16 = Set Hub with	nail in top to	
		Pipe line Grade	about 7' East	
			of E pier.	
611+97 <sup>o</sup> = Pier #2	7.2	366.1 = Ground El. at	of pier #2	
	8.12	367.19 = Set Hub with	nail in top	
		400 Below Pipe line Grade	about 7'	
			East of E pier	
611+82 <sup>o</sup> = Pier #1				

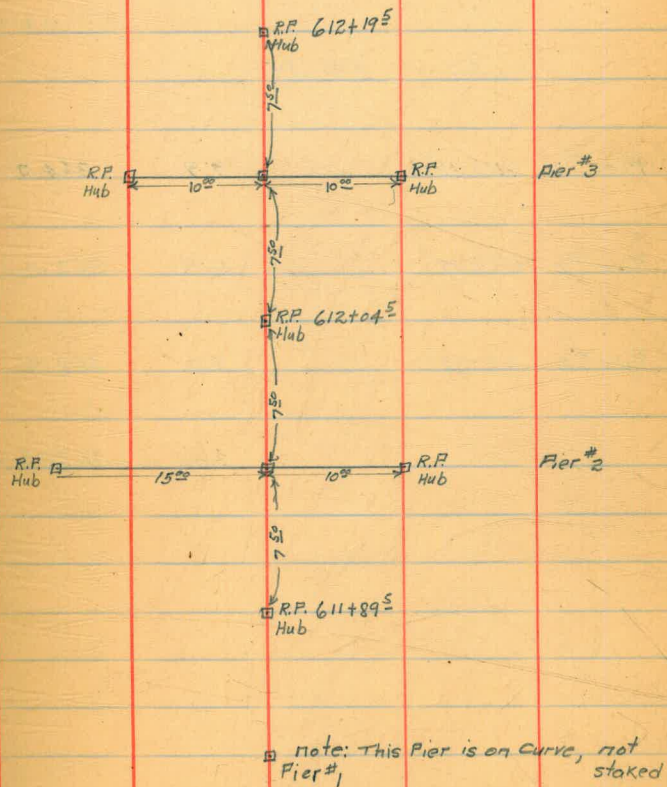
Copied 4/7/30 - W.M.S.

April, 4, 1930  
Simpson - X  
Jacobs Zool - ch.  
Bailey - ch.

clear and warm.

23

Top of Air valve 25' Rt. of sta. 610+85



6/13/30  
Simpson  
Soper  
Remmen

Elevations in Bottoms of excavations  
for piers at Trestle # ~~35~~ 31

	1.35	373.89	372.54 = B.M. on	old Trestle
Pier #1	611+82°	9.9	364.0	
Pier #2	611+97°	11.9	362.0	
Pier #3	612+12°	9.0	364.9	
		6.70	367.19 = check on	Hub 4' Below Pipe grade

clear & Warm.

April, 7, 1930

clear and warm.

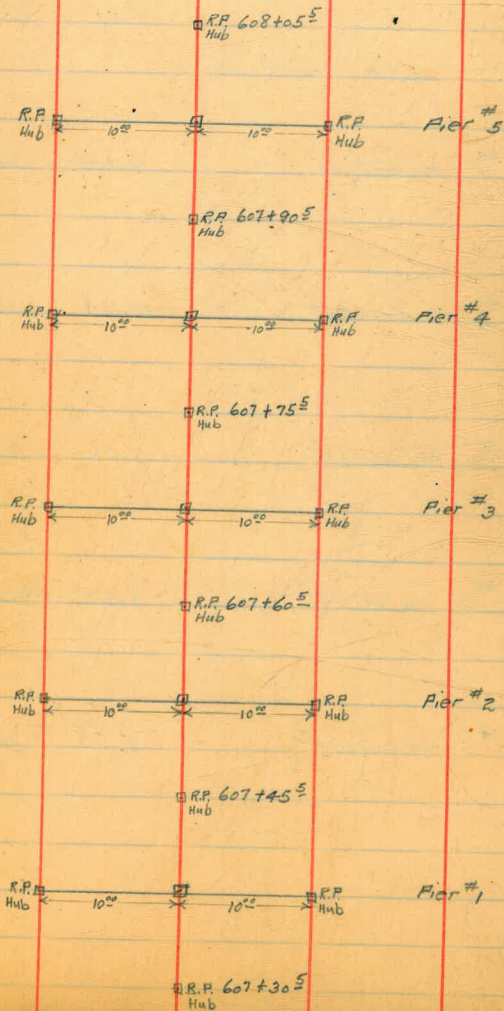
Elliott - π  
Simpson - notes  
Bailey - Hd. chn.  
Remmirt - R. chn.

25

Layout of Piers and Reference Points for Trestle #30

B.M. #98	0.42	333.37	332.95	
607+98° Pier #5	-4.6	328.8	Ground El.	at $\perp$ pier #5
	-2.11	331.26	set Hub	with nail
			in Top to	Pipe Line Grade
			about 6' West	of $\perp$ pier #5
607+83° Pier #4	-6.0	327.4	Ground El.	at $\perp$ pier #4
	-2.92	330.45	set Hub with	nail in Top
			to pipe line	Grade about
			6' west of	$\perp$ pier #4
607+68° Pier #3	-10.7	322.7	Ground El.	at $\perp$ pier #3
	-3.72	329.65	set Hub with	nail in Top
			to pipe line	Grade about
			9' west of	$\perp$ pier #3
607+53° Pier #2	-9.8	323.6	Ground El.	at $\perp$ pier #2
	-4.53	328.84	set Hub with	nail in top to
			Pipe line	Grade about 6' West
				of $\perp$ pier #2
607+38° Pier #1	8.8	324.6	Ground El.	at $\perp$ pier #1
	-5.33	328.04	set Hub with	nail in top to
			Pipe line	Grade about 6'
				East of $\perp$ pier #1

Spike in cap of old Trestle #31 - 30' Rt. Sta. 608+15.



Elevations in Bottoms of Excavations  
at Trestle #<sup>30</sup>~~27~~

		332.95 = B.M.	
2.65	335.60		
T.P.		10.64	324.96
6.00	330.96		
Pier #1	sta. 607+38 <sup>0</sup>	12.13	318.83
Pier #2	sta. 607+53 <sup>0</sup>	12.34	318.62
Pier #3	sta. 607+68 <sup>0</sup>	11.31	319.65
Pier #4	sta. 607+83 <sup>0</sup>	8.52	322.44
Pier #5	sta. 607+98 <sup>0</sup>	5.55	325.41

6/23/30  
SIMPSON  
Soper  
Remmen

26

clear and warm.

Nail in sill of old Trestle #37 -  
Sta. 608+15

328.04 = grade

328.84 = "

329.65 = "

330.45 = "

331.26 = "

Layout of Piers and Reference Points for  
Trestle # 31<sup>29</sup>

B.M. # 98		332.95
0.31	333.26	

607+21 <sup>2</sup> = Pier #2	6.0	327.3 = Ground El. at	☉ of pier #2
	3.13	330.13	Set Hub with nail in Top 3.00 Above Pipe line Grade about 7' East of ☉ pier #2

607+06 <sup>2</sup> = Pier #1	7.7	325.6 = Ground El. at	☉ of pier #1
	6.94	326.32 =	Set Hub with nail in Top Grade about 6' East of ☉ pier #1

April, 7, 1930

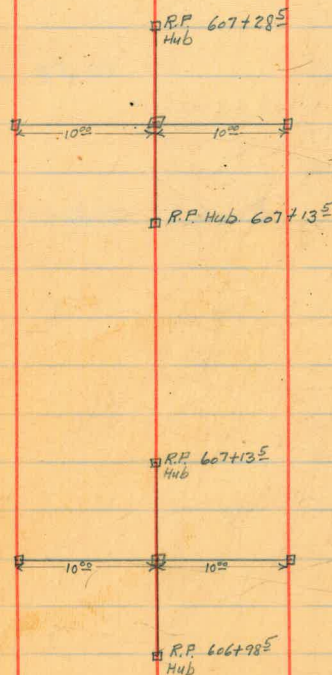
Clear and Warm

27

Elliott - T  
Simpson - notes  
Bailey - Hd. chm.  
Remmin - R. chm.

☉

Spike in cap of old Trestle # 37 - 30' Rt. Sta. 608+15



6/24/30  
Simpson  
Butzine  
Remmen

28

Elevations in Bottoms of excavations  
of Trestle #29

Clear and Hot.

332.95 = B.M. #98

Rt. Sta. 608+15

0.59 333.54

Pier #1 607+21<sup>0</sup>

11.45 322.09

Pier #2 607+06<sup>2</sup>

10.54 323.00

3.40 330.14 = check on

Grade Hub 3" Above Pipe grade at Pier #2

Layout of Piers and Reference Points for  
Trestle #30

B.M. #98			332.95
	10.72	343.67	
T.P.		11.24	332.43
	0.55	332.98	

605+79 <sup>±</sup> Pier #2	5.3	327.7	Ground El. at $\Phi$ of Pier #2
	5.52	327.46	set Hub with nail in top to Pipe line Grade about 6' East of $\Phi$ Pier

605+71 <sup>±</sup> Pier #1	- 5.4	327.6	Ground El. at $\Phi$ Pier #1
	- 5.10	327.88	set Hub with nail in top to Pipe line Grade about 6' East of $\Phi$ Pier #1

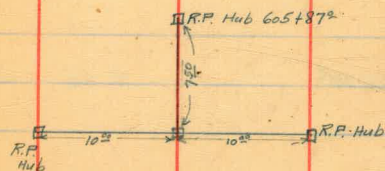
April, 7, 1930.  
Elliott - T  
Simpson - notes  
Bailey - Hdchn.  
Remmit - Rchn.

Clear and Warm.

29

 $\Phi$ 

spike in cap of old Trestle #37 - 30' Rk. sta. 608+15





Elevations in Bottoms of  
excavations at Trestle #<sup>28</sup><sub>30</sub>

332.95 = B.M. #98

0.59 333.54

Pier #1 605+71

8.70 324.84

Pier #2 605+79<sup>5</sup>

9.26 324.28

6/24/30  
Simpson  
Butzine  
Remmen

Rt. Sta. 608+15

clear and water

O.R.-S.D. 2<sup>nd</sup> Main Pipe Line

Lay-out of Piers and Reference Points  
for Trestle # <sup>27</sup> 28

Note: Trestle #29 cut out.

B.M. #		263.75 35	45' Rt. of Sta.	592+40 on Bolt Head of Blow-off valve
0.99	264.74			
592+58 <sup>o</sup> Pier #4	5.7	259.0	Ground El. at	Pier #4
	-4.64	260.10	set Hub with	nail in Top to Pipe grade 6/25/30
592+43 <sup>o</sup> Pier #3	6.6	258.1	Ground El. at	Pier #3
	6.64	258.10	set Hub 2" Below	Pipe grade 6/25/30
592+28 <sup>o</sup> Pier #2	6.7	258.0	Ground El. at	Pier #2
	-6.64	258.10	set Hub 2"	Below Pipe grade 6/25/30
592+17 <sup>o</sup> Pier #1	5.5	259.2	Ground El. at	Pier #1
	5.64	259.10	set Hub 1"	Below Pipe grade 6/25/30

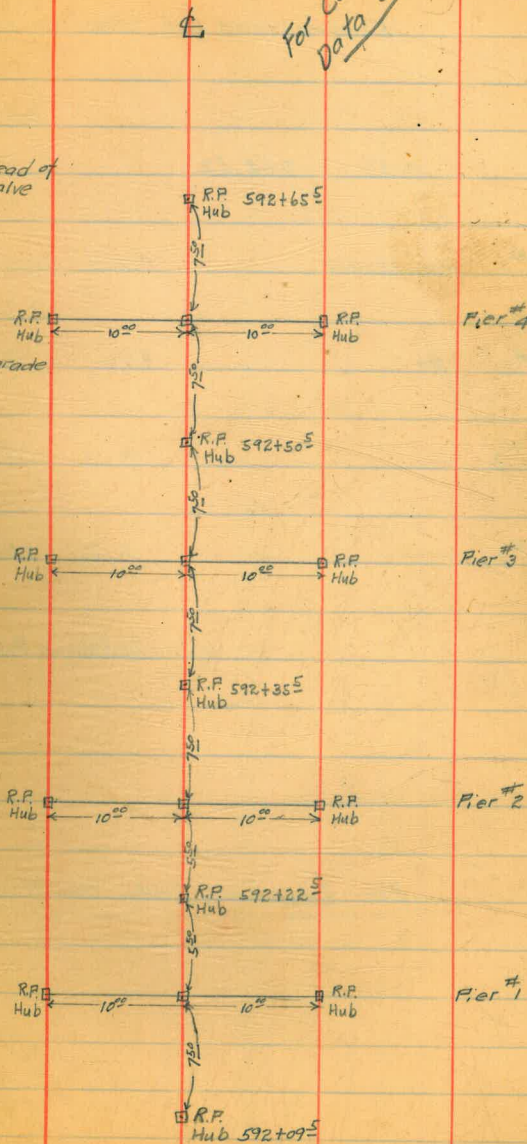
April 7, 1930

Elliott - π  
Simpson - Notes  
Bailey - Hd. Chn.  
Remmert - R. Chn.

clear and warm.

For Construction  
Data see Page 32

31



Elevations in Bottoms of  
Excavations at Trestle #287

			263.75 = B.M. # 76
	0.87	264.62	
Pier #1	Sta. 592+17	8.40	256.22
Pier #2	Sta.	9.72	254.90
Pier #3		10.18	254.44
Pier #4		8.62	256.00
		5.52	259.10 = check

For Location Data see Page 31

6/26/30  
Simpson  
Jacobson 2007  
Butzine

32

clear and warm

on Grade hub 1<sup>2</sup> Below Pipe grade

Elevations in Bottoms of  
Excavations at Trestle #<sup>26</sup>/<sub>27</sub>

	2.01	321.95	319.94 = B.M.
Pier #1	Sta. 571+12 <sup>e</sup>	12.49	309.46
Pier #2	Sta. 571+27 <sup>e</sup>	10.36	311.59

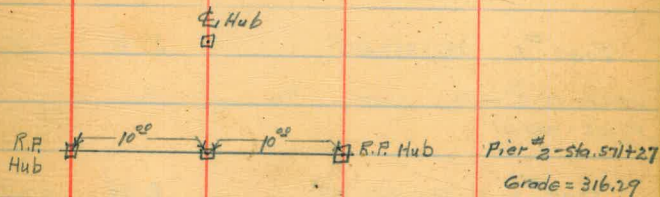
6/27/30

Clear and Warm.

33

Simpson  
Jacobszoon  
Patzine  
Remmen

Price Location and R.P.'s For Piers  
At Trestle #<sup>26</sup>/<sub>27</sub>



1.48	345.30	343.82 = B.M. #92
	T.P. 12.75	Nail in stringer of old Trestle #34
0.48	333.03	
	13.09	319.94 = set B.M. Nail in Cross Brace Timber of old Trestle #34
1.63	321.57	8.1 313.5 = Ground El. Pier #1
	7.41	314.16 = set Hub with nail in Top 2 <sup>nd</sup> Below Pipe grade
	5.6	316.0 = Ground El. Pier #2

7/3/30  
S. H. P. 07  
Remmen  
Butzine

Elevations in Bottoms of Excavations  
at Trestle #26<sup>25</sup>

	4.45	335.45	331.00 = Hub 1" Above Pipe Grade at Pier #4
Pier #1	Sta. 567+32 <sup>2</sup>	6.5	329.0
Pier #2	Sta. 567+47 <sup>2</sup>	8.38	327.07
Pier #3	Sta. 567+62 <sup>2</sup>	11.52	323.93
Pier #4	Sta. 567+77 <sup>2</sup>	8.65	326.80
	4.52	330.93	= check on Grade # Hub Pier 2

Location and R.P.'s For Piers  
at Trestle #25

□ 2"x2" Hub & only

R.P. Hub	← 10 <sup>00</sup> →	□	← 10 <sup>00</sup> →	R.P. Hub	Pier #4 Sta. 567+77 Grade = 330.00
R.P. Hub	← 10 <sup>00</sup> →	□	← 10 <sup>00</sup> →	R.P. Hub	Pier #3 Sta. 567+62 Grade = 330.33
R.P. Hub	← 10 <sup>00</sup> →	□	← 10 <sup>00</sup> →	R.P. Hub	Pier #2 Sta. 567+47 Grade = 330.92
R.P. Hub	← 10 <sup>00</sup> →	□	← 10 <sup>00</sup> →	R.P. Hub	Pier #1 Sta. 567+32 Grade = 332.16
					□ 2"x2" Hub & only
0.98	355.75				354.77 = R.M. #1 Top Air Valve
1.02	343.69	T.P.	13.08		342.67 60' Rt. Sta. 567+50
			11.8		331.90 = Ground El. & Pier #1
			10.53		333.16 set Hub with nail in Top 1" Above Pipe Grade, at Pier #1
			14.4		329.30 = Ground El. & Pier #2
			12.77		330.92 = set Hub with nail in Top to Pipe Grade Pier #2
4.15	335.85	T.P.	11.99		331.70
			7.8		328.00 = Ground El. Pier #3
			5.7		330.1 = Ground El. #4

7/1/30  
Simpson  
Butzine  
Remmen

clear and warm 35

Location and R.P.'s For Trestle #25

Hub & only

R.P. Hub ← 10' → Hub ← 10' → R.P. Hub Pier #3 = Sta. 560+65  
Grade = 266.95

R.P. Hub ← 10' → Hub ← 10' → R.P. Hub Pier #2 = Sta. 560+50  
Grade = 266.50

R.P. Hub ← 10' → Hub ← 10' → R.P. Hub Pier #1 = Sta. 560+35  
Grade = 266.05

Hub & only

3.98

274.79

270.81 = B.M. #89 - Nail  
in side of  
Valve Box  
60' Rt. Sta. 560+70

10.5 264.3 = Ground El. & Pier #1  
9.74 265.05 = Set Hub with  
Nail in Top 1"  
Below Pipe grade  
at Pier #1

11.1 263.7 = Ground El. & Pier #2  
11.29 263.50 = Set Hub with  
Nail in Top 3"  
Below Pipe Grade  
at Pier #2

9.3 265.5 = Ground El. & Pier #3  
7.84 266.95 = Set Hub with  
Nail in Top to  
Pipe Grade at  
Pier #3

7/2/30  
Simpson  
Butzine  
Remmen

36

Location And R.P.'s For Trestle <sup>#23</sup>  
~~#24~~

Hub & only

R.P. Hub ← 10° → Hub ← 10° → R.P. Hub Pier #4 - Sta. 549+87°  
Grade = 274.14

R.P. Hub ← 10° → Hub ← 10° → R.P. Hub Pier #3 - Sta. 549+72°  
Grade = 273.51

R.P. Hub ← 10° → Hub ← 10° → R.P. Hub Pier #2 - Sta. 549+57°  
Grade = 273.16 ✓

R.P. Hub ← 10° → Hub ← 10° → R.P. Hub Pier #1 - Sta. 549+42°  
Grade = 273.09 ✓

Hub &

3.27

277.99

274.72 = B.M. #27 - Nail in  
sill of old Trestle

5.1

272.9 = Ground El. & Pier #4

3.85

274.14 = set Hub with nail in  
Top to Pipe Grade  
at Pier #4

9.82

268.17 = Ground El. & Pier #3

8.48

269.51 = set Hub with nail in  
Top 4" Below Pipe  
Grade at Pier #3

9.60

268.37 = Ground El. & Pier #2

6.83

271.16 = set Hub with nail in  
Top 2" Below Pipe Grade  
at Pier #2

5.60

272.39 = Ground El. & Pier #1

4.90

273.09 = set Hub with nail  
in Top to Pipe Grade  
at Pier #1

7/3/30  
Simpson  
Butzine  
Price

7/2/30  
Simpson  
Butzine  
Remmen

37

Location And R.P.S For Trestle # <sup>22</sup>  
23

Hub & only

R.P. Hub ← 10<sup>00</sup> → Hub ← 10<sup>00</sup> → Pier #2 = 548+79<sup>0</sup>  
Hub R.P. Hub Grade = 274.20 ✓

R.P. Hub ← 10<sup>00</sup> → Hub ← 10<sup>00</sup> → Pier #1 = Sta. 548+66<sup>0</sup>  
Hub R.P. Hub Grade = 275.02 ✓

Hub & only

---

3.27	277.99	274.72 = B.M. #1 - Nail in Sill of old Trestle
	3.4	274.6 = Ground E.L. Pier 1
	2.97	275.02 = Set Hub with Nail in Top to Pipe Grade of Pier #1
	3.4	274.6 = Ground E.L. Pier 2
	5.79	272.20 = Set Hub with Nail in Top 2" Below Pipe Grade of Pier #2



7/7/30  
Simpson  
Remmer  
Butzire

38

Location and R.P.s For Trestle #21

R.P. Hub ← 10<sup>00</sup> → R.P. Hub ← 10<sup>00</sup> → Pier #4 = Sta. 516+91<sup>5</sup>  
Grade = 170.33

R.P. Hub ← 10<sup>00</sup> → R.P. Hub ← 10<sup>00</sup> → Pier #3 = Sta. 516+76<sup>5</sup>  
Grade = 170.20

R.P. Hub ← 10<sup>00</sup> → R.P. Hub ← 10<sup>00</sup> → Pier #2 = Sta. 516+61<sup>5</sup>  
Grade = 170.22

R.P. Hub ← 10<sup>00</sup> → R.P. Hub ← 10<sup>00</sup> → Pier #1 = Sta. 516+46<sup>5</sup>  
Grade = 170.31

---

4.81	180.16	175.35 = 8.M. #82
		10.2 170.0 - Ground El. Pier #1
		9.85 170.31 = Set Hub to Pipe Grade at Pier #1
		12.7 167.5 = Ground El. Pier #2
		11.16 169.00 = Set Hub 1' Below Pipe # Grade at Pier #2
		12.0 168.2 = Ground El. Pier #3
		11.16 169.00 = Set Hub 1' Below Pipe Grade at Pier #3
		9.8 170.4 = Ground El. Pier #4
		9.82 170.34 = Set Hub to Pipe Grade at Pier #4

7/8/30  
Simpson  
Remmert  
Butzine

39

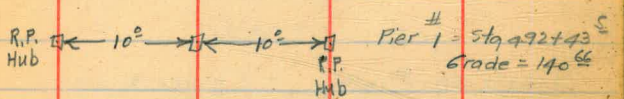
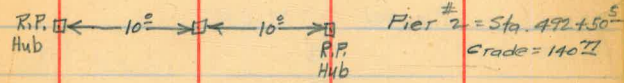
Location And R.P.s For Trestle #21

R.P. Hub ← 10' → R.P. Hub ← 10' → Pier #2 Sta. 493+63<sup>#</sup>  
Grade = 143.40

R.P. Hub ← 10' → R.P. Hub ← 10' → Pier #1 Sta. 493+48<sup>#</sup>  
Grade = 142.65

1.28	161.54	T.P. 12.94	149.60	161.26 = B.M. #78 N. Edge Iron Pin Sta. 494+15
3.02	152.62			
		7.97	144.65	set Hub with Nail in Top 2' Above Pipe Grade at Pier #1
		9.22	143.40	set Hub with Nail in Top to Pipe Grade at Pier #2

Location And R.P.'s For Trestle #20



1.28	162.54	161.26 = B.M. #78
	T.P.	N Edge Iron
	12.94	Pier Sta. 494+15
3.02	152.62	

11.96 140.66 Set Hub with nail in Top to Pipe Grade at Pier #1

11.85 140.77 Set Hub with Nail in Top to Pipe Grade at Pier #2

# Elevations in Bottoms of Excavations, Trestle #18

			392.96	B.M. 50 60' Rt. Sta 268+33 A.V.
TP.	0.59	393.55	12.24	381.31
	0.37	381.68		
TP.			12.55	369.13
	0.31	369.44		

12.31 357.13 pipe Grade  
357.14 Pier #1.

1.81 358.95

Excavation

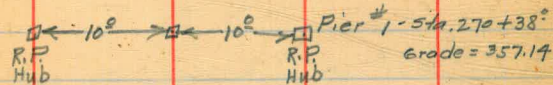
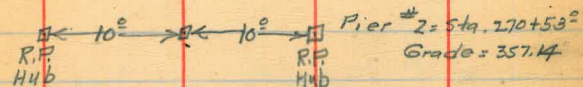
Elevation

Pier # 1	351.36
Pier # 2	348.93
Pier # 3	352.83

7/18/30  
Jacobs 2007  
Butzime

# Location And R.P.s For Trestle #18

Hub & only



D Hub & only

1.15	394.11		392.96 = B.M. #50
1.52	382.99	12.64	381.47
0.90	371.19	12.70	370.29
1.69	360.10	12.78	358.41
		6.0	354.1 = Ground El. #1
		2.96	357.14 = Set Hub to Pipe Grade at Pier #1
		8.9	351.2 = Ground El. #2
		8.96	351.14 = Set Hub 6' Below Pipe # Grade at Pier 2
		5.0	355.1 = Ground El. #3
		2.96	357.14 = Set Hub to Pipe grade at Pier #3

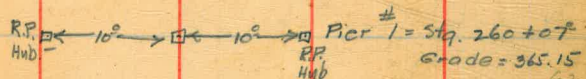
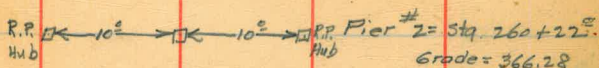
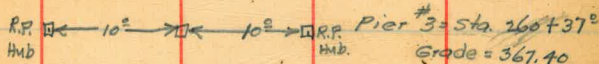
Elevations in Bottoms of Excavations, Trestle #17

Pier #	Pl. Bottom of Excavation	Hub 2" above Grade pier # 4	Hub at pipe Grade pier # 1
Pier # 4	366.63	370.52 0.36 370.88	365.14 5.74 365.15
Pier # 3	359.93		
Pier # 2	357.77		
Pier # 1	361.41		

7/18/30  
Jacobszoon  
Butzine

Location And R.P.s For Trestle #17  
Hub & only

7/15/30  
Simpson  
Leexy  
Remmen



Hub & only.

2.19	394.21	392.02 = B.M. # 47
	T.P. - 12.45	60' R. Sta. 257+80
		A.V.
0.84	382.60	381.76
	T.P. 13.09	369.51
3.17	372.68	
	9.1	363.6 = Ground E.L. #1
	7.53	365.15 = Set Hub to Pipe Grade at Pier #1
	11.3	361.4 = Ground E.L. #2
	10.40	362.28 = Set Hub 4" Below Pipe Grade at Pier #2
	9.7	363.0 = Ground E.L. #3
	7.28	365.40 = Set Hub 2" Below Pipe Grade at Pier #3
	3.9	368.8 = Ground E.L. #4
	2.16	270.52 = Set Hub 2" Above Pipe Grade

P  
P  
P  
P

		393.24 = B.M. #3	
0.87	394.11	60' Rt.	
	T.P. - 12.74	Sta. 252+2	
		381.37	
0.61	381.98		
	T.P. 11.51	370.47	
3.07	373.54		
	4.8	368.7 = Ground El. #5	
	4.84	368.70 = Set Hub to Pipe Grade at Pier #5	
	8.1	365.4 = Ground El. #4	
	5.98	367.56 = Set Hub 1' Below Pipe Grade at Pier #4	
	12.2	361.3 = Ground El. #3	
	11.14	362.40 = Set Hub 6" Below Pipe Grade at Pier #3	
	12.1	361.4 = Ground El. #2	
	10.30	363.24 = Set Hub 5" Below Pipe Grade at Pier #2	
	6.3	367.2 = Ground El. #1	
	4.46	369.08 = Set Hub 1' Above Pipe Grade at Pier #1	

7/18/30  
Simpson  
Remmert  
Butzine

44

Location And Reference points for Piers  
At Trestle #16.

Note: The stations where Pipe  
Joints are to be made are  
as follows - 250+94.26,  
251+24.72, 251+54.48, and  
sta. 251+84.2, as given to  
me by L. H. Hill.

Pier #5 = Sta. 251+75.0  
Grade = 368.70 ✓  
6.0  
393.0

Pier #4 = Sta. 251+62.0  
Grade = 368.56 ✓

Note: These piers are  
set on the cords the pipe  
is to laid on, and not on  
the actual curve.

Pier #3 = Sta. 251+47.0  
Grade = 368.40 ✓

Pier #2 = Sta. 251+32.0  
Grade = 368.24 ✓

Pier #1 = Sta. 251+17.0  
Grade = 368.08 ✓





7/24/30  
Simpson  
Lee, Ky  
Bliss

16

Location and Reference Points For  
Piers At Trestle # 15

385.19 = B.M. # 32  
Top A.V.

0.30 385.49  
T.P. 12.87 372.62  
0.73 373.35

8.3 365.0 = Ground El. #1  
6.35 367.00 = Set Hub  
1' Below  
Pipe Grade  
at Pier #1

9.3 369.0 = Ground El. #2  
7.35 366.00 = Set Hub  
2' Below  
Pipe Grade  
at Pier #2

5.6 367.7 = Ground El. #3  
4.35 369.00 = Set Hub  
1' Above  
Pipe Grade  
at Pier #3

□ Pier #3 - Sta. 136+71'  
Grade = 368.00

□ Pier #2 - Sta. 136+56'  
Grade = 368.00

□ Pier #1 - Sta. 136+41'  
Grade = 368.00

Note: These Piers are set on, and  
at Right Angles to the cords the  
Pipe will be laid on, assuming  
that a pipe joint will come at  
Sta. 136+32<sup>58</sup> and continuing on  
15 Foot cords ahead.

The Western Pipe and Steel Co's  
Profile sheets are not available  
at this time

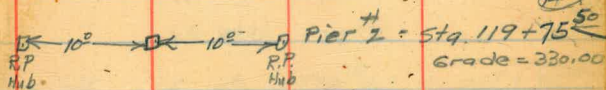
clear and warm.

47

Location And Reference Points For  
Piers At Trestle # 14.

7/21/30  
Simpson  
Jacobs 2007  
Leeky  
C. Bliss  
Remmer

Hub & Sta. 119+80<sup>E</sup>



Hub & Sta. 119+55<sup>E</sup>

335.14 = B.M. # 30

1.16 336.30

7.5 328.8 = Ground El. # 2  
 5.30 331.00 = Set Hub 1' Above Pipe Grade at Pier # 2

7.1 329.2 = Ground El. # 1  
 5.30 331.00 = Set Hub 1' Above Pipe Grade at Pier # 1

7/21/30  
 Simpson  
 Jacobs 2007  
 Lecky  
 C. Bliss

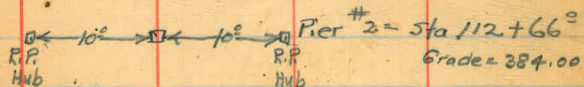
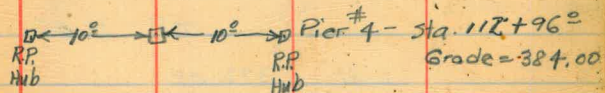
Remmen Location And Reference points for  
 Trestle #13.

Clear and warm

18

3.04	399.97	396.93 = B.M. #29 A.V.
	T.P. 12.38	387.59
2.25	389.84	
	6.5	= 383.3 = Ground El. #1
	5.84	384.00 = Set Hub to Pipe Grade at Pier #1
	9.3	380.5 = Ground El. #2
	8.84	381.00 = Set Hub 3" Below Pipe Grade at Pier #2.
	8.9	380.9 = Ground El. #3
	7.84	382.00 = Set Hub 2" Below Pipe Grade at Pier #3
	6.2	383.6 = Ground El. #4
	5.84	384.00 = Set Hub to Pipe Grade at Pier #4

Hub on  $\phi$  only



Hub on  $\phi$  only

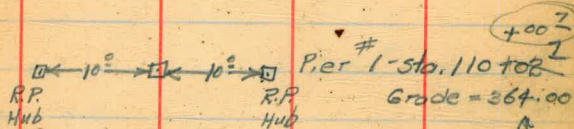
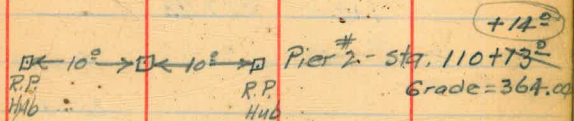
7/21/30  
Simpson  
Jacob 52007

49

Location And Reference Points For  
Trestle #12

4.09	394.16		390.07 = B.M. #28 Top. A.Y.
	T.P.	12.70	381.46
1.25	382.71		
	T.P.	12.45	370.26
1.81	372.07		
		7.9	364.2 = Ground El. #1
		6.07	366.00 = Set Hub 2' Above Pipe Grade at Pier #1
		6.6	365.5 = Ground El. #2
		4.07	368.00 = Set Hub 4' Above Pipe Grade at Pier 2

Hub & only.



Hub & only.

Note: Position of  
these Piers  
changed on  
account of  
Being too close  
to the wash  
O.K. by L.H.H.

7/21/30  
Simpson  
Jacobs  
Lecky  
Bliss  
Remmen

Clear and Warm

50

Location And Reference Points For  
Trestle #11

316.59 = B.M. #27

Nail in sill of Trestle

Hub  $\phi$  only

1.14

317.73

6.6 311.1 = Ground El. #4

3.73 314.00 = Set Hub 2'  
Above Pipe  
Grade at Pier  
#4

8.9 308.8 = Ground El. #3

7.73 310.00 = Set Hub 2'  
Below Pipe Grade  
at Pier #3

8.9 308.8 = Ground El. #2

9.73 308.00 = Set Hub 4'  
Below Pipe Grade  
at Pier #2

8.2 309.5 = Ground El. #1

5.73 312.00 = Set Hub to  
Pipe Grade  
at Pier #1

Hub  $\phi$  only  
 $\square \leftarrow 10' \rightarrow \square \leftarrow 10' \rightarrow \square$  Pier #4 = Sta. 105+24'  
Grade = 312.00

$\square \leftarrow 10' \rightarrow \square \leftarrow 10' \rightarrow \square$  Pier #3 = Sta. 105+09'  
Grade = 312.00

$\square \leftarrow 10' \rightarrow \square \leftarrow 10' \rightarrow \square$  Pier #2 = Sta. 104+74'  
Grade = 312.00

$\square \leftarrow 10' \rightarrow \square \leftarrow 10' \rightarrow \square$  Pier #1 = Sta. 104+79'  
Grade = 312.00

Hub  $\phi$  only

7/21/30  
Simpson  
Jacobs 2007  
Lecky  
Bliss  
Remmen

clear and warm

51

Location And Reference Points  
For Trestle #10

0.51 360.85

360.34 = B.M. #25

Nail in sill of old  
Trestle #14.

13.3 347.5 = Ground El. #2

10.85 350.00 = Set Hub 2'  
Below Pipe  
Grade at  
Pier #2

12.4 348.4 = Ground El. #1

9.85 351.00 = Set Hub 12'  
Below Pipe  
Grade at Pier #1

Hub on E only

← 10' → ← 10' → Pier #2 = Sta. 98+56.5  
R.P. P.P. Grade = 352.00  
Hub Hub

← 10' → ← 10' → Pier #1 = Sta. 98+41.5  
R.P. P.P. Grade = 352.00  
Hub Hub

Hub on E only

50

7/21/30  
Simpson  
Jacobs Zook  
Lee Ky  
Bliss

Clear and Warm

52

Location And Reference Points  
- For Trestle #9.

2.50 330.39  
28  
2.39

#  
327.89 = B.M. 23

Nail in sill of old  
Trestle #13  
Sta. 92+90

5.7 324.7 = Ground El. #1  
3.39 327.00 = set Hub 1'  
Below Pipe  
Grade at Pier #1

7.6 322.8 = Ground El. #2  
6.39 324.00 = set Hub 4'  
Below Pipe  
Grade at Pier 2

5.1 325.3 = Ground El. #3  
3.39 327.00 = set Hub 1'  
Below Pipe  
Grade at Pier  
#3

□ Hub on  $\frac{1}{2}$  only

□ ← 10° → □ ← 10° → □ Pier #3 Sta. 93+26°  
R.P. R.P. Grade = 328.00  
Hub Hub

□ ← 10° → □ ← 10° → □ Pier #2 - Sta. 93+11°  
R.P. R.P. Grade = 328.00  
Hub Hub

□ ← 10° → □ ← 10° → □ Pier #1 - Sta. 92+96°  
R.P. R.P. Grade = 328.00  
Hub Hub

□ Hub on  $\frac{1}{2}$  only

2.93 335.85

332.92 = B.M. #20

Nail in sill of old  
Trestle #12

6.6 329.2 = Ground El. #2  
5.85 330.00 = Set Hub to  
Pipe Grade at  
Pier #2

6.8 329.0 = Ground El. #1  
5.85 330.00 = Set Hub to  
Pipe Grade at  
Pier #1

53

Location And Reference Points  
For Trestle #8

Hub on  $\phi$  only

$\square \leftarrow 10^\circ \rightarrow \square \leftarrow 10^\circ \rightarrow \square$  Pier #2 = Sta. 81+58<sup>00</sup>  
R.P. Hub R.P. Hub Grade = 330<sup>00</sup>

$\square \leftarrow 10^\circ \rightarrow \square \leftarrow 10^\circ \rightarrow \square$  Pier #1 = Sta. 81+43<sup>00</sup>  
R.P. Hub R.P. Hub Grade = 330<sup>00</sup>

Hub on  $\phi$  only



Location And Reference Points  
For Trestle #7

0.38 343.70  
39  
4.70

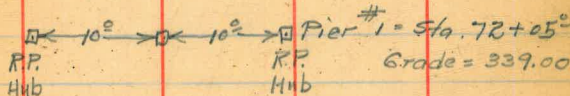
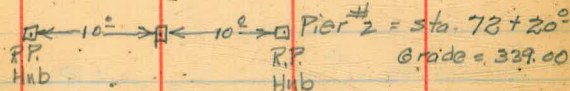
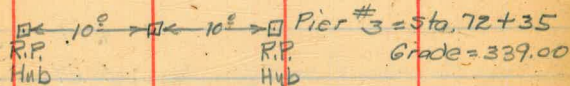
343.32 - B.M. #18  
Nail in Cross Brace  
of old Trestle #10

7.5 336.2 = Ground El. #1  
5.70 338.00 = Set Hub 1<sup>0</sup>  
Below Pipe  
Grade at Pier 1

8.5 335.2 = Ground El. #2  
7.70 336.00 = Set Hub 3<sup>0</sup>  
Below Pipe Grade  
at Pier #2

6.2 337.5 = Ground El. #3  
3.70 340.00 = Set Hub 1<sup>0</sup>  
Above Pipe  
Grade at Pier  
#3

Hub on  $\Phi$  only



Hub on  $\Phi$  only

3.69 317.61  
 $\frac{12}{5.61}$

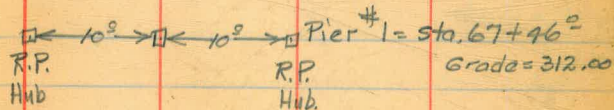
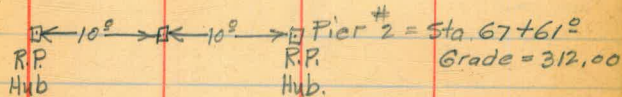
313.92

6.7 310.9 = Ground El. #1  
5.61 312.00 = Set Hub  
to Pipe Grade  
at Pier #1

6.8 310.8 = Ground El. #2  
5.61 312.00 = Set Hub to  
Pipe Grade  
at Pier #2

55  
Location and Reference Points  
For Trestle #6

Hub on  $\Phi$  only



Hub on  $\Phi$  only

2.25 343.04

340.79 = B.M.  $\frac{1}{14}$

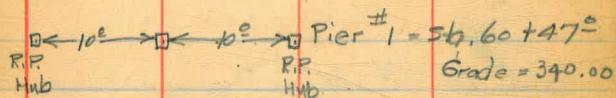
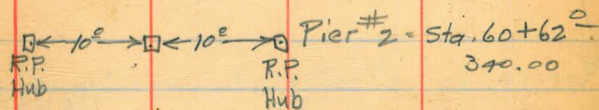
4.0 339.0 = Ground El.  $\frac{1}{1}$   
3.04 340.00 = set Hub  
to Pipe  
Grade at  
Pier  $\frac{1}{1}$

7.5 338.5 = Ground El.  $\frac{1}{2}$

4.04 339.00 = set Hub  
 $\frac{1}{2}$  Below  
Pipe Grade  
at Pier  $\frac{1}{2}$

56  
Location And Reference Points  
for Trestle #5

Hub on  $\frac{1}{2}$  only



Hub on  $\frac{1}{2}$  only

2.9

343.0  
1.4  
341.6  
2.9  
344.5

Location And Reference Points  
For Trestle #4

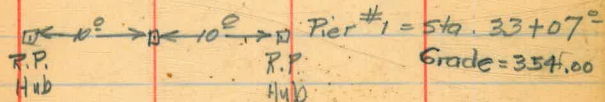
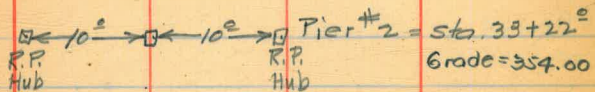
0.29 364.51

364.22 B.M. #9  
nail in sill of  
Trestle

11.0 353.5 = Ground El. #1  
9.51 355.00 = set Hub  
12' Above  
Pipe Grade  
at Pier #1

10.8 353.7 = Ground El. #2  
9.51 355.00 = set Hub  
12' Above Pipe  
Grade at  
Pier #2

□  $\Phi$  Hub only



□  $\Phi$  Hub only

1.76 345.88  
38  
7.88

344.12 B.M. #7  
Nail in sill  
of old Trestle  
29 + 30

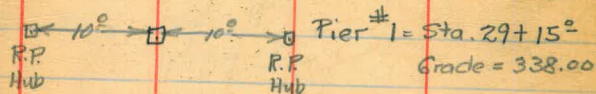
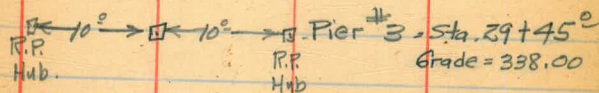
8.1 337.8 = Ground El. #1  
6.88 339.00 = Set Hub  
1' Above  
Pipe grade  
at Pier #7

8.8 337.1 = Ground El. #2  
8.88 337.00 = Set Hub 1'  
Below Pipe  
Grade at  
Pier #2

7.9 338.0 = Ground El. #3  
7.88 338.00 = Set Hub  
to Pipe Grade  
at Pier #3

58  
Location And Reference Points  
For Trestle #3

Hub on  $\Phi$  only



Hub on  $\Phi$  only

2.85 343.86  
36.295  
7.565

341.01 = B.M. #3  
Nail in sill  
of old  
Trestle #2

8.50 335.86 = Ground El. #1

7.54 336.32 = set Hub  
to Pipe  
Grade at  
Pier #1

8.65 335.20 = Ground El. #2

7.565 336.295 = set Hub  
to Pipe  
Grade  
at Pier #2

Location And Reference Points  
For Trestle #3

□ Pier #2 = Sta. 10+95±  
Grade = 336.295

□ Pier #1 = Sta. 10+80±  
Grade = 336.32

Pipe Joints = 10+70.06  
10+99.78

Location And Reference Points  
For Trestle #1

□ Pier #4 = Sta. 1+49<sup>00</sup>  
Grade = 392.00

□ Pier #3 = Sta. 1+34<sup>00</sup>  
Grade = 392.00

□ Pier #2 = Sta. 1+19<sup>00</sup>  
Grade = 392.00

□ Pier #1 = Sta. 1+04<sup>00</sup>  
Grade = 392.00



















Sta. 4x6 2x12 2x10

09





















16°

33

$$258+86 = RT.$$

$$258+75 = 0^{\circ}54'$$

$$258+50 = 2^{\circ}54'$$

$$258+25 = 4^{\circ}54'$$

$$258+00 = 6^{\circ}54'$$

$$257+75 = 8^{\circ}54'$$

$$257+50 = 10^{\circ}54'$$

$$257+25 = 12^{\circ}54'$$

$$257+06 = P.C. = 14^{\circ}25'$$

16°

$$251+66 = 60$$

$$251+00 = 5^{\circ}19.7'$$

$$250+75 = 7^{\circ}20'$$

$$250+53 = P.C. 9^{\circ}05'$$

66.6

48

5328

2664

3 1968

5.197

21.94

48

17552

8776

105312

720

145

405

61.60 B.M.

6.82

68.42  
52  
627  
555  
72

485+00

58.60

484+75

57.95

484+50

57.30 ✓

484+25

56.65 ✓

484+00

56.00 ✓

483+82<sup>22</sup>

55.54

D. = 16°

485+43<sup>75</sup>

485+25 = 1°30'

485+00 = 3°30'

484+75 = 5°30'

484+50 = 7°30'

484+25 = 9°30'

484+00 = 11°30'

483+92<sup>08</sup> = 12°08'

792  
48  
6236  
3168  
38016

1875  
48  
15000  
7500  
90000

25  
45  
0

IMPROVED  
AND  
INFORMATION

TABLE No. 2  
To find Tangent and External for curve of any other degree, divide the degree of curve and add correction found in table of corrections. Degree of curve with a fraction may be found by dividing tangent (or external) opposite 1 by given tangent (or external).  
The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.  
1738  
26  
3556  
46228

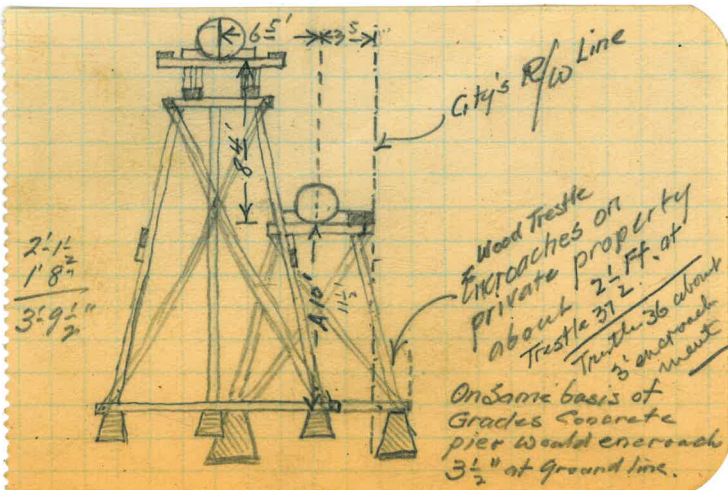
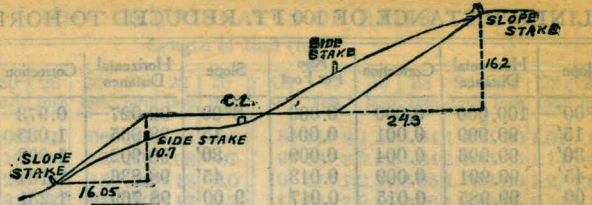


TABLE VIII  
INCLINATION OF 10 FT. REDUCED TO HORIZONTAL



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/4 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	00 00	00 15	00 30	00 45	00 60	00 75	00 90	01 05	01 20	01 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.

Handwritten calculations on the right page of the notebook. The calculations consist of several vertical columns of numbers, many of which are arranged in a way that suggests they are being subtracted from each other. The numbers are written in dark ink and include various digits and decimal points. Some numbers are underlined, and some are written in a larger, bolder script. The calculations appear to be related to the table on the left page, possibly showing how specific values from the table are used in a larger context or how they are derived. The overall appearance is that of a field notebook or a working draft for a technical document.

52  
 49  
 788  
 328  
 70  
 3688  
 123  
 251+112  
 71.26  
 69.4  
 260+52  
 120  
 122  
 5209  
 69  
 5209  
 36  
 52.75  
 783+64  
 270  
 582  
 1380  
 1958.2  
 6159.916  
 611+0.05  
 15000  
 3704  
 37.50  
 33.18  
 5.8  
 27.38  
 191  
 26  
 27.91  
 536  
 2114  
 60.4792  
 108  
 287  
 536  
 1112  
 2784  
 6672  
 74508  
 1092  
 788  
 67  
 5514  
 7228  
 127  
 52.1  
 7.8  
 3692  
 471  
 75  
 33  
 3237  
 3532  
 705  
 35  
 276  
 250  
 1380  
 552  
 6900  
 270  
 828  
 5209  
 179  
 53.83  
 55.0  
 1656  
 17388  
 37921  
 3707  
 7.1  
 536  
 333.13  
 6.83  
 326.30  
 533.13  
 62  
 326.93  
 636  
 30  
 19080  
 62  
 327.34  
 536  
 1690  
 1000  
 33000  
 7000  
 660

B.M.# 354.20  
 525  
 359.45  
 85  
 350.9  
 347.01

657+55

98  
 5  
 490

2565  
 246.8  
 9.7

2.00 X 3.72

7.47 X

83  
 262  
 345

296  
 83  
 379

27  
 27  
 78

198  
 6189  
 6  
 29  
 30  
 10

296  
 83  
 379

317.39  
 9.64  
 327.03  
 20.5  
 2.52

448  
 618.9  
 6  
 29  
 28  
 10  
 -6

1.6  
 619.7  
 6  
 37  
 36  
 322

51

4.25  
 3.22  
 7.47

.83

322  
 83  
 405

148  
 6189  
 6  
 29  
 30  
 10

296  
 83  
 379