

W354

354

Tables for Excavations and Embankments.  
Distances from Centre of Roadway for Cross Sectioning.  
Roadway 22 feet wide. Side Slopes 1 to 1.  
For Single Track Excavation.

	0	1	2	3	4	5	6	7	8	9	
	<b>MICROFILMED</b>										
0	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	0
1	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	1
2	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	2
3	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	3
4	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	4
5	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	5
6	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	6
7	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	7
8	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	8
9	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	9
10	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	10
11	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	11
12	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	12
13	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	13
14	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	14
15	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	15
16	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	16
17	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	17
18	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	18
19	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	19
20	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	20
21	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	21
22	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	22
23	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	23
24	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	24
25	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	25
26	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	26
27	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	27
28	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	28
29	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	29
30	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	30
31	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	31
32	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	32
33	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	33
34	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	34
35	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	35
36	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	36
37	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	37
38	49.0	49.1	49.2	49.3	49.4	49.5	49.6	49.7	49.8	49.9	38
39	50.0	50.1	50.2	50.3	50.4	50.5	50.6	50.7	50.8	50.9	39
40	51.0	51.1	51.2	51.3	51.4	51.5	51.6	51.7	51.8	51.9	40

13+31 0/1  
2 52 89  
7 78 25

2 62  
61

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

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

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

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

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

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

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

**THE FREDERICK POST CO.**  
ENGINEERING and DRAFTING SUPPLIES  
IRVING PARK STATION  
CHICAGO, ILL.

+ 12.80

- 0.37

- 6.70

569.65

12.80

582.45

0.37

582.08

6.70

588.78

6.76

588.02

12.45

600.47

5.41

88.8

595.06

5.43

88.8

600.49

7.87

7.87

Our Leather Bindings Note Books are carried in the following: No. 380 FIELD BOOK, Left Hand Page 8, Right Hand Page 10. No. 382 FIELD BOOK, Left Hand Page 7, Right Hand Page 9. No. 381 MINING FIELD BOOK, Left Hand Page 7, Right Hand Page 9. No. 383 FIELD BOOK, Left Hand Page 8, Right Hand Page 10. Horizontal lines 12.75 each. 6.45 each.

We also carry the Note Books 7 1/2 above bound in the same quality of paper which can be furnished at a somewhat lower price. 600.50 24.4

THE FREDERICK POST CO. ENGINEERING and DRAFTING SUPPLIES IRVING PARK STATION CHICAGO, ILL.

Enlargement

0+56 - 0+72

1+03 - 1+29

Jumbo

9-0 R 16'10"

1.80  
32  
48

11+60

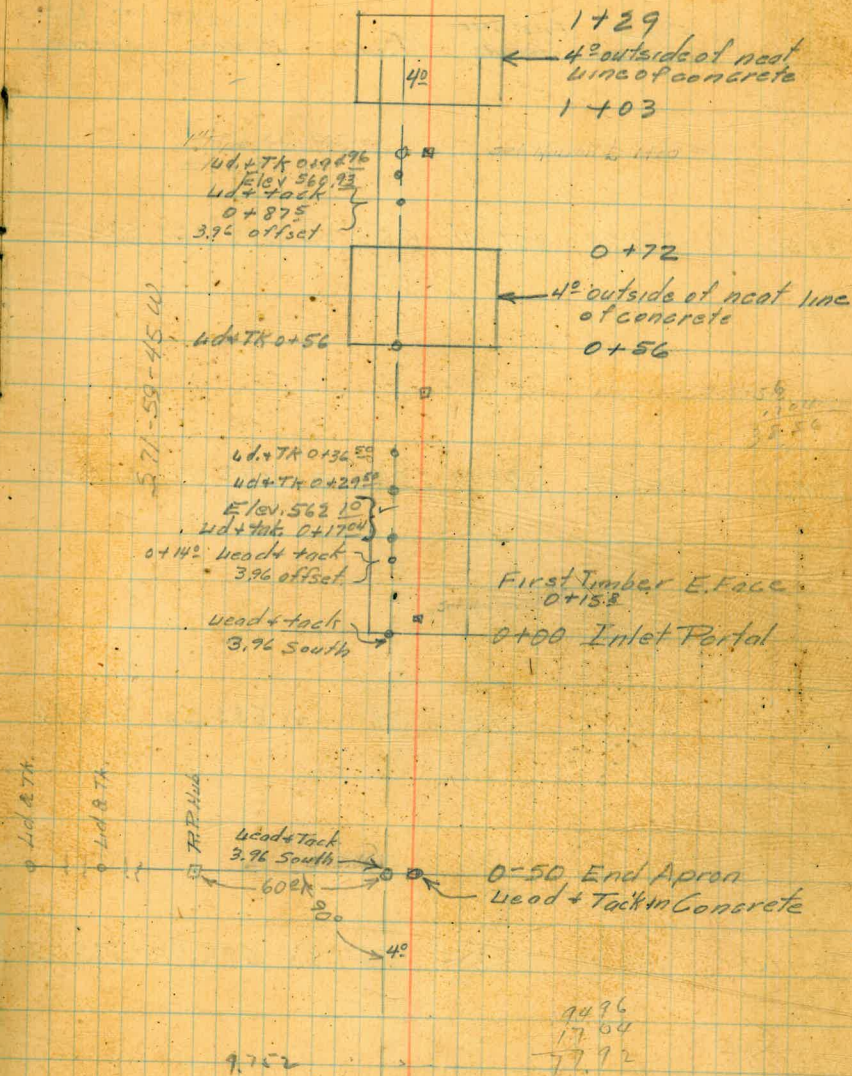
8+60

2  
Corner 1.46 above finish floor  
" 11.04 out from  $\frac{1}{2}$

Bottom Wall Plate 15.42 above finish floor

Station	Finish Floor Grade	First Slope Grade	Excavation Grade	
			Floor Crown Untimbered	Crown Timbered
1+00	560.49 16.1	571.49	559.49	586.99 587.41
0+50	561.32	572.32	560.32	587.82 588.24
0+00	562.16	573.16	561.16	588.66 589.08
0-50	563.00	574.00		

Total height to crown of excavation above  
floor excavation grade is -  
In untimbered section 27.50 feet  
In timbered section 27.92 feet.



	Finish Floor Grade	First Slope Grade	Floor	Untimber Crown	Timber Crown
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3+50	556.34	567.34	555.34	582.84	583.26
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3+00	557.17	568.17	556.17	583.67	584.09
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2+50	558.00	569.00	557.00	584.50	584.94
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2+00	558.83	569.83	557.83	585.33	585.75
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1+50	559.66	570.66	558.66	586.16	586.58
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S 71-59-45 W

lid + tack  
3700  
Elev. 557.22

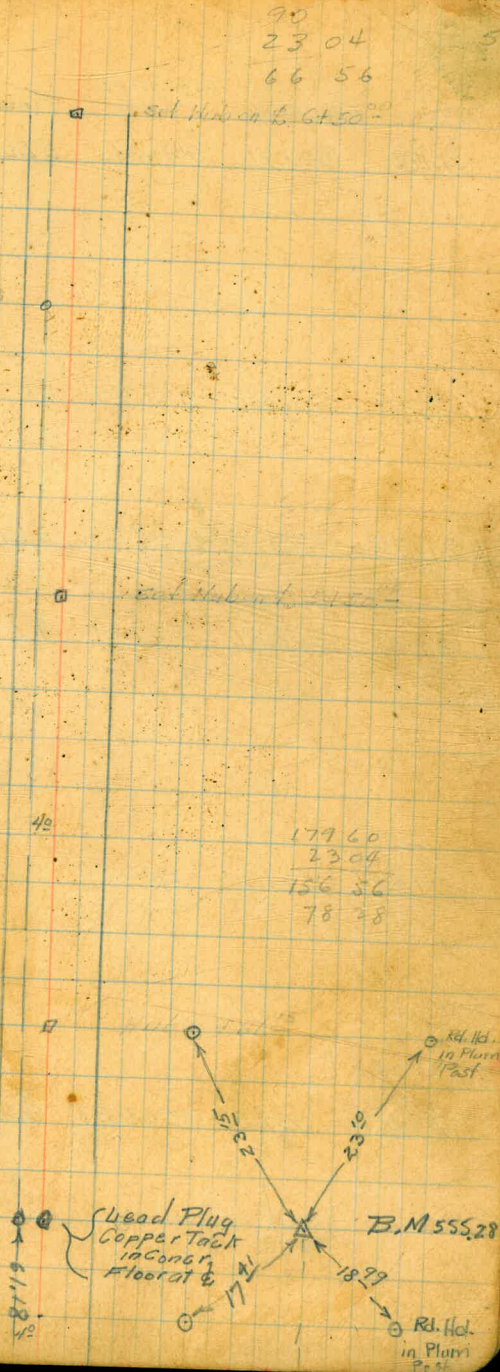
lid + tack in Concrete  
Sta. 1+50 E1. 559.64

	Finish Floor Grade	First Step Grade	Floor	Untimber Crown	Timber Crown
6+50	551.36	562.36			
6+50	551.36	562.36	550.36	577.86	578.28
6+00	552.19 75.6	563.19	551.19	578.69	579.11
5+50	553.02	564.02	552.02	579.52	579.94
5+00	553.85	564.85	552.85	580.35	580.77
4+50	554.68 25.67	565.68	553.68	581.18	581.60
Δ 4+20 <sup>59</sup>	555.17	566.17	554.17	581.67	582.07
4+00	555.51	566.51	554.51	582.01	582.43

N 87-56-10 W

B.M. 559.59  
Spike in Post  
4+20.59

Δ 77 230405 4+17.77  
4+20.59



111-57-21  
68-02-40  
50-00-00

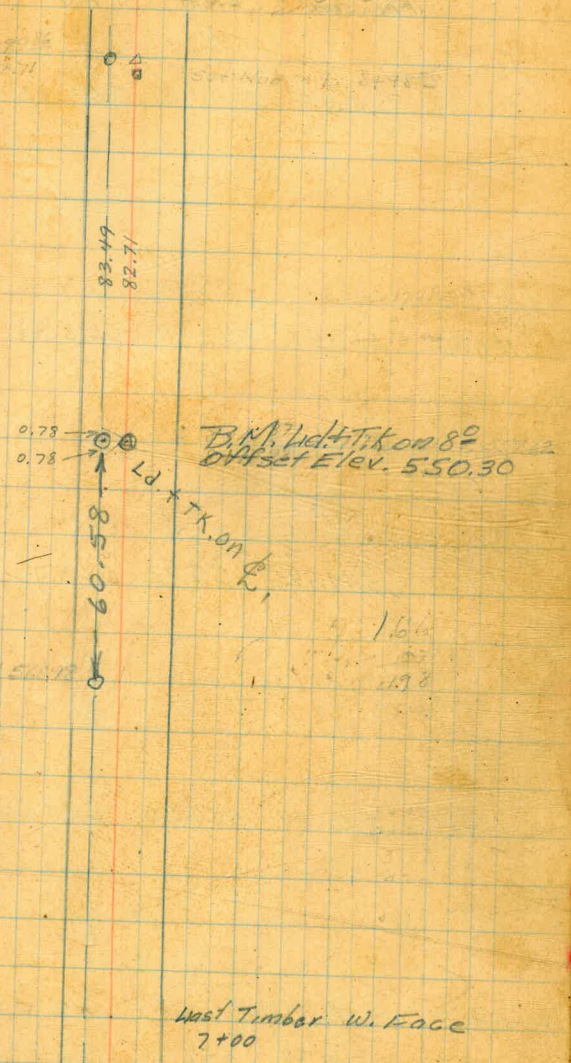
	Finish Floor Grade	First Slope Grade	Floor	Untimber Crown	Timber Crest
9+00	547.21 12.33	558.21 4.12	546.21	573.71	574.13
8+50	548.04 12.50	559.04	547.04	574.54	574.96
Δ 8+17.5	548.59	559.59	547.59	575.09	575.51
8+00	548.87 14.50 27.37 64.0 13.3 - 2° High	559.87	547.87	575.37	575.79
7+50	549.70	560.70	548.70	576.20	576.62
7+00	550.53 2	561.53 61.03	549.53	577.03	577.45

N 62-58-49 W

N 84-56-10 W

Δ RA 21° 57' 21"

1" Pipe Elev. 561.03  
500.64925





	Finish Floor Grade	First Stage Grade	Floor	Untimber Crown	Timber Crown
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11+50	543.05	554.05	542.05	569.35	569.97
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11+00	543.89 1.46 05.35	554.89	542.89	570.39	570.81
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10+50	544.72	555.72	543.72	571.22	571.64
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10+00	545.55 1.46 01	556.55	544.55	572.05	572.47
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9+50	546.38	557.38	545.38	572.88	573.30
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1. Pgs 10+75.00  
Elev 555.11  
262-58-49 W

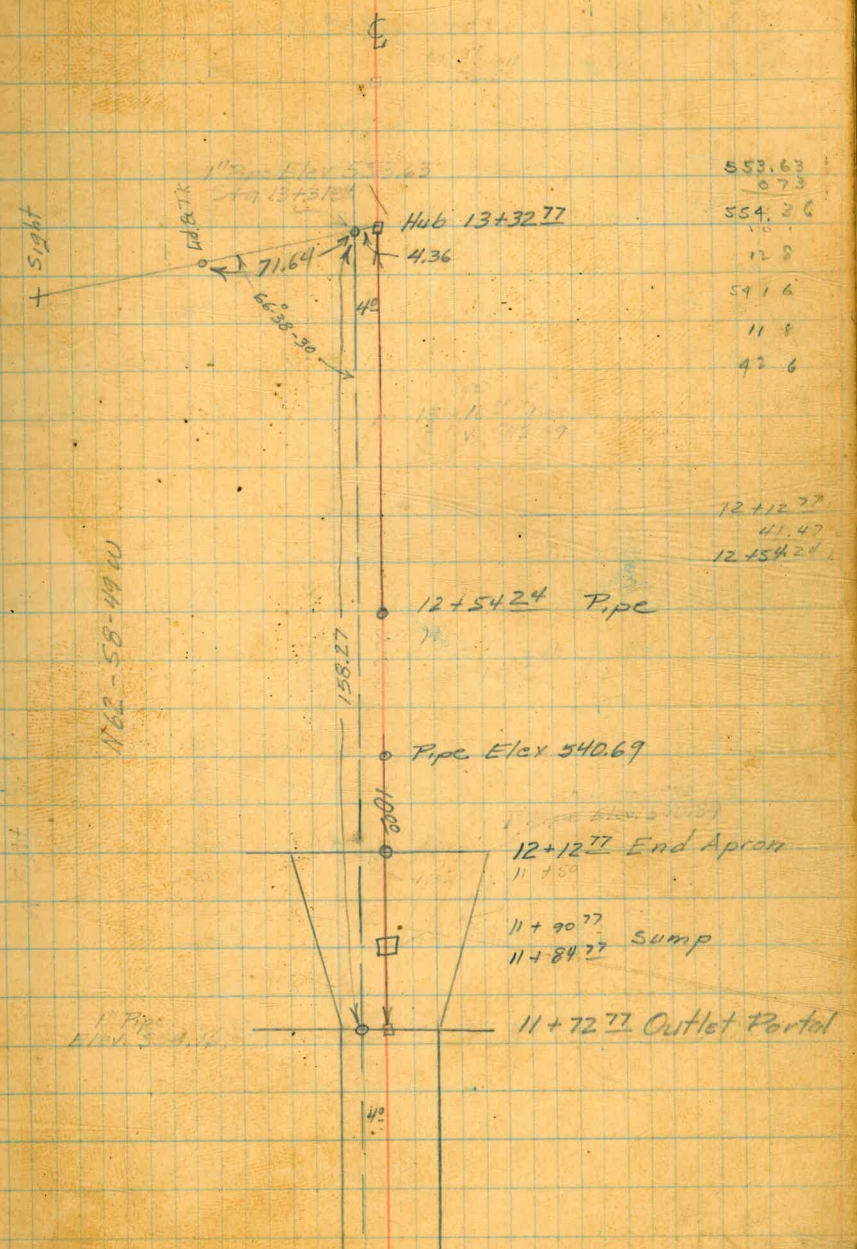
96.67

← First Timber E. Face  
9+615

Finish Floor Grade	First Slope Grade	Floor	Unumber Gross	Timber Gross
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12+12 <sup>77</sup>	542.00	553.00	541.00	
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11+72 <sup>77</sup>	542.67	553.67	541.67	569.17	569.59
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553.63  
0.73  
554.36  
12.8  
541.6  
11.8  
42.6  
  
12+12<sup>77</sup>  
41.47  
12+54.24

Tunnel Plug And outlet Pipes.

Nov. 5-1934.

B.M.	7.57	569.68	562.11
		North 36" Pipe	Grade
0+97.54	= $\phi$ 45° Angle	5.34	64.24 566.97
1+00.64	= Dwn. Str. end of 45° Angle	5.32	64.36 566.95
1+08.64		5.26	64.42 566.79
1+20.64		5.45	64.23 566.59
1+31		4.52	65.16 566.39

South 36" Pipe

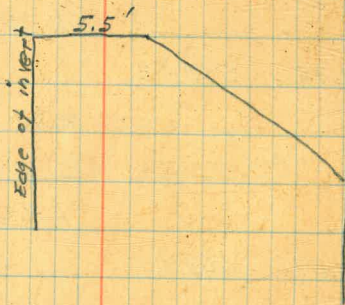
0+94.46	$\phi$ 45° Angle	5.21	64.47 566.98
0+98.04	Dwn. Str. end of 45° Angle	5.17	64.51 566.97
1+09.04		5.34	64.34 566.79
1+21.04		5.40	64.28 566.59
1+31		4.52	65.16 566.39

B.M.	7.73	569.84	562.11
		1.84	568.00
T.P.	6.84	573.09	3.59 566.25
		5.09	568.00
B.M.	7.06	569.17	562.11
		2.13	571.30

10.3  
4.8  
5.5

10.29

4.29  
3.96  
0.34



571.30

June 16 - 1932

Entrance Portal

B.M.	1.48	598.17	596.69
T.P.			13.01 585.16
	3.08½	588.24½	
T.P.			11.54 576.70½
	4.03	580.73½	
Set B.M.		7.64	573.10
0+02.6		3.52½	577.21
0+08.9		3.72½	577.01

Exit Portal

B.M.	6.18	569.83	563.65
T.P. "A"		12.85	556.98
	1.75	558.73	
		6.73	552.00
Set B.M.		5.10	553.63
T.P.		1.86½	556.86½
	7.07½	563.94	
B.M.		0.29	563.65
T.P. "A"	2.55	559.53	556.98
11+65.6		1.74	557.79
11+36.6		1.26	558.27
B.M.	5.64	559.27	553.63
Set B.M.		5.11	554.16

Top of pipe 4' offset 0-50  
 Set Nail 4' above grade on first post  
 " " " " last "

Set Elev. Near Top wall  
 Top pipe 4' offset Sta 13+31.04

Check

Set Nail 4' above grade on first timber  
 " " " last "

Pipe at Sta. 13+31.04  
 Pipe at Portal Sta. 11+72.77

June 22 - 1932

B.M.	6.11	559.74	553.63
10+89.4		0.67	559.07

4' above grade (Set Fid, 1/4 each side)

June 25 - 1932

B.M.	0.81	564.46	563.65
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T.P.		9.98	554.48
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	5.11	559.59	
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B.M.		5.97	(Red Not Plumb) 553.62 553.63
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Pipe at 13+31.04

T.P.B.M.		5.42	554.17 554.16
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Pipe at 12+72.22

	5.55 1/2	559.72 1/2	
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	4.62	555.10	
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Pipe at 10+75.00

T.P.		5.09	554.63 1/2
------	--	------	------------

557.38

24	2164
2166	26
144	99
144	932
24	
2424	6316

B.M.	6.74	561.84	555.10
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10+75

9+74			556.98
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			+4
			560.98

Set B.M.		4.90	556.94
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Top pipe 9+78.33

July 15

B.M.	7.60	562.70	555.10
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Pipe 10+75

Set B.M.		3.99	558.71
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Pipe 8+99.86

B.M.	5.44	578.30	572.86
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Pipe 0-50

Set B.M.		6.66	571.64
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1+00.15

Entrance Portal

July 11-1932

B.M. 0.75 577.44 596.69  
 T.P. 1.44 585.86 13.02 584.42  
 Set B.M. 13.00 572.86  
 T.P. 12.31 597.29 0.88 584.98  
 B.M. 0.59 596.70 596.69

July 21

B.M. 6.07 1/2 564.78 1/2 558.71  
 Set B.M. 5.16 1/2 559.62  
 B.M. 6.00 565.62 559.62  
 Set B.M. 4.64 560.98

July 29, '32

B.M. 5.35 576.99 571.64 pipe 1400<sup>15</sup>

Aug 3-1932

B.M. 5.14 576.78 571.64  
 Set B.M. 6.80 569.98

Aug 4

B.M. 6.65 566.27 559.62  
 5.24 561.03

Top of pipe 0-50

Check

27.75

Top pipe 8+9986

" " at P.1

Pipe at P.1

Top of pipe 6+64, 7+5735

13.3  
 577.3

152.78  
 1400.15  
 2152.93  
 60  
 213  
 7+5735  
 59.10  
 6+98.25

Pipe 1+0015

Pipe 2+5293

6+9825

Aug 12

B.M. 7.20 566.82 559.62

Pipe at A

6+98.25  
78.22  
6+20.03

Set B.M. 4.59 562.23

Pipe 6+20.03

Aug 15

B.M. 4.89 574.87 569.98

Pipe 2+52.93

2+52.93  
1 07.30  
3+60.23

Set B.M. 5.66 569.21

Pipe 3+60.23

Aug 22-1932

B.M. 6.51 575.72 569.21

3+60.23

T.P. 10.49 565.23

2.93 568.16

B.M. 5.92 562.24 562.23 6+20

Aug 25

B.M.	6.39	561.49	555.10		
B.M.			6.04	555.75	on L Hub sta. 10+74 <sup>96</sup>
B.M.			4.57	556.92	on L Hub sta. 9+98 <sup>06</sup>
B.M.			2.47	559.02	on L Hub sta. 8+98 <sup>06</sup>

Aug 27, 1932

B.M.	0.22	563.87	563.65		
			12.46	551.41	
	0.61	552.02			
Set B.M.			9.63	542.39	Top of pipe 13+10
Set B.M.			11.13	540.89	Top of pipe 12+12 <sup>22</sup>

Elliott  
Simpson  
Soper  
Remmen

Sept 28, 1932

B.M.	12.94	579.41	566.47		
T.P.	0.90	568.23	12.08	567.33	
B.M.	1.03	568.25 <sup>25</sup>	1.03	567.20 <sup>22</sup>	567.23 <sup>22</sup>
Set B.M.			5.14	563.12 <sup>11</sup>	Top pipe (1405)
	13.06	576.17 <sup>17</sup>			
			0.59	575.58 <sup>58</sup>	
	12.43	588.01 <sup>01</sup>			
			1.37 <sup>1/2</sup>	586.62 <sup>61 1/2</sup>	
B.M.	11.82	598.44 <sup>43 1/2</sup>			
			1.74	596.70 <sup>69 1/2</sup>	596.89



Tunnel Plug And outlet Pipes

Oct. 24-1934

B.M.	4.12	566.22		562.10
0+92 <sup>5</sup>			4.22	562.0
1+05			3.5	562.7
+31			2.22	564.0

Oct. 25-1934

B.M.	5.25	567.36		562.11	Grade	
0+87 <sup>54</sup>	42" pipe	North 42" pipe	5.66	561.70	562.05	F. 135 ✓
+90 <sup>66</sup>	Dwn. Str. End of 45° Angle		5.71	561.65	563.32	F. 167 ✓
+96 <sup>66</sup>	42" pipe		5.26	562.10	564.21	F. 211 ✓
1+08 <sup>66</sup>	" " "		4.69	562.67	565.69	F. 302 ✓
+20 <sup>66</sup>	" " "		4.50	562.86	566.32	F. 346 ✓
1+31	" " "		3.17	564.19	566.12	F. 193 ✓

South 42" pipe.

0+85 <sup>26</sup>	42" pipe	South 42" pipe	6.70	560.66	562.99	F. 233 ✓
+88 <sup>58</sup>	Dwn. Str. end of 45° Angle		6.73	560.63	563.24	F. 261 ✓
+96 <sup>58</sup>	" " "		5.29	562.07	564.21	F. 214 ✓
1+08 <sup>58</sup>	" " "		4.80	562.56	565.69	F. 313 ✓
+20 <sup>58</sup>	" " "		4.60	562.76	566.32	F. 356 ✓
1+31	" " "		3.17	564.19	566.12	F. 193 ✓

Nov. 2-1934

B.M.	5.17	567.28		562.11
			2.78	564.50
			3.03	564.25
			2.28	565.00

Cont'd. on Page 9

Sept 6 - 1932

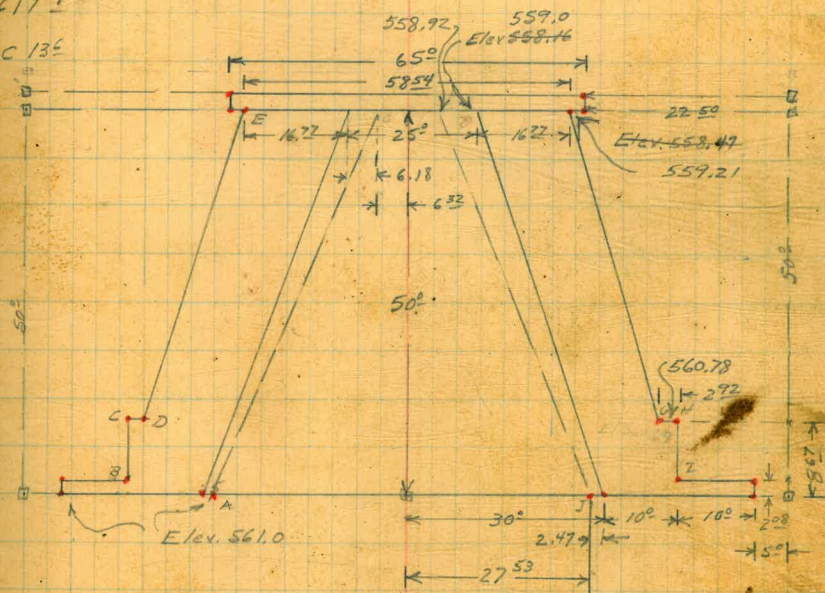
B.M.	3.54	570.77	567.23	Grade
"A"	7.2	563.1	561.0	C.26
"B"	3.6	67.2	561.0	C.63
"C"	2.6	68.2	560.7	C.75
"D"	6.4	64.4	560.7	C.31
"E"	+5.6	76.4	558.5	C.172
"F"	+1.3	72.1	558.5	C.136
"G"	4.7	66.1	560.7	C.54
"H"	1.1	69.7	560.7	C.92
"I"	+4.6	75.4	561.0	C.144
"J"	5.7	65.1	561.0	C.46

Aug 29-30-31

Neat Line Station  
 Diversion Tunnel Approach 16

216.46  
 3.23  
 12.50  
 6.18  
 6.32

Elevations to Bottom of Footing



30.00  
 2.47  
 27.53

14  
15  
1  
1  
20

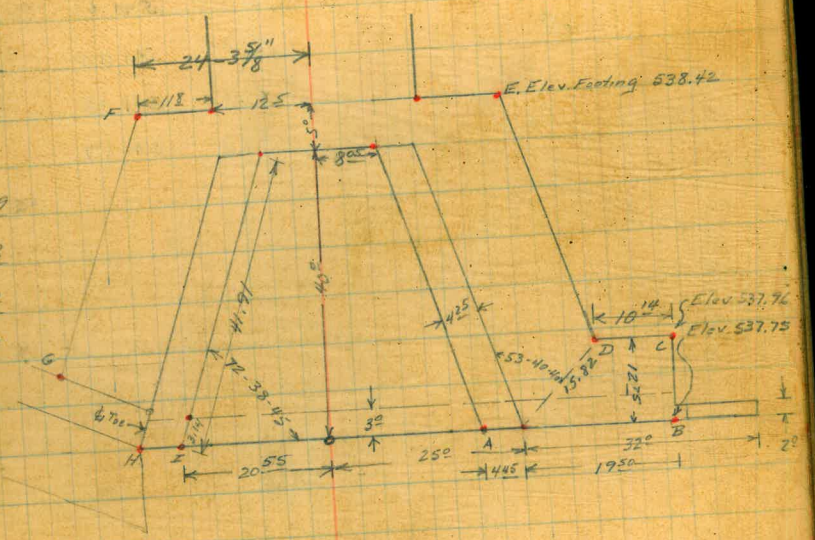
Sept 6 - 1932  
 Elliott  
 Simpson  
 Soper  
 Remick

B.M.			563.65	
	1.40	565.05		
T.P.			12.98	552.07
	2.68	554.75		
B.M.			5.43	549.32
	1.21	550.53		Spike in
"A"			8.4	542.1
"D"			6.3	541.2
"E"			+13.1	563.6
"C"			+9.8	560.3
B.M.	1.29	550.61		549.32
"F"			+7.7	558.3
"G"			7.8	542.8
"H"			8.4	542.2
"I"			8.4	542.2
Nail in So. Side of Tunnel in Post			5.2	545.4
Nail in No. Side of Tunnel in Post			3.2	547.4
B.M.			5.58	545.03
				545.02

Aug 31 - 1932 Neat Line States  
 Diversion Tunnel Outlet

South bank of cut 13100±

- C 43
- C 62
- C 252
- C 223
- C 199
- C 48
- C 44
- C 44
- C 70
- C 90



Concrete Footing Grades,  
N $\frac{1}{2}$  Exit Portal Structure

Oct. 28, 1932

B.M. 0.68 547.68 547.00

6.67 541.01

6.61 541.07

6.49 541.19

6.16 541.52

5.99 541.69

6.07 541.61

6.24 541.44

6.40 541.28

6.01 541.67

Diversion Tunnel  
Sept 15 - 1932

B.M. 4.69 574.67 569.98  
 X at 4+20<sup>59</sup> + 7.00 = 581.67 581.67

B.M. Sight 2+52<sup>93</sup> 569.98 584.45

B.M. 5.60 1/2 574.81 1/2 569.26 pipe 3+60<sup>23</sup>

Set B.M. 5.79 1/2 569.02 Pipe 4+20<sup>59</sup>

9.52 below Grade  
 X at 4+61<sup>15</sup> 2.45 HI 571.47 580.99

Sight at 8+17.25  
 575.09  
 - 9.52  
 565.57  
 B.M. 559.62  
 5.95

Pipe 2+52<sup>93</sup>

Gr. 575.09  
 7  
 H.I. 568.09  
 B.M. 559.62  
 Target. 8.47

577.45  
 B.M. 569.98  
 on pipe 7.47

584.45  
 7

577.45  
 74.67  
 + 2.78

4+20<sup>59</sup> 2.93  
 40.56 .0166  
 44 61.15 1758  
 584.50 1758  
 .05 293  
 584.45 048638

4+61<sup>15</sup>  
 20<sup>59</sup>  
 40.56

582.01 569.98  
 74.67 2.78  
 7.24 572.76  
 .01667  
 11.15 581.18  
 8335 .19  
 1667  
 1667 580.99  
 1667  
 18587.05 575.09  
 - 9.52  
 565.57

Sept 16

Xat 4+615  
 B.M. 2.42 571.44 569.02  
 +9.55 580.99

Sight -  
 8+17<sup>15</sup>

575.09  
 - 9.55  
 565.54  
 B.M. 559.62  
 5.92

Sept 20

B.M. 8.12 565.06 556.94  
 X 8+17<sup>15</sup>

Q 9+78<sup>33</sup>

Timber  
 9+75

11.13 from timber crown to wall plate

21

.0166  
 5  
 .0830

.01667 2  
 28.33 5

572.88 ✓  
 .47  
 572.41

5001  
 5001  
 13336  
 4334  
 .5722611 =

28.33  
 .016667

19831  
 16998  
 16998  
 2833  
 47216611

{ Grade 575.09  
 HI 565.06  
 LOW 10.03

Sight { Grade 572.41  
 - 10.03

562.38  
 B.M. 556.94  
 5.44

Elliott  
Simpson  
Soper  
Remmen.

22

Sept 24 - 1932 Elev. Grade  
B.M. 5.87 565.01 559.14

9+17.87 Hub

± Hub

8+17.15  
1+44.02  
6+73.13  
1 00 00

± Hub

5+73.13

8+17.15

+12.62 577.63 575.09

Plug 2.54 High

Chained  
+73.34

576.80  
567.15  
+9.65

8+90.49

+8.85 573.86 573.87

Plug 0.01 Low

8+17.15  
1 00 22  
6 62

9+24.49

+8.33 573.34 573.30

Plug 0.04 High

9+24.49

7+60.93

+11.00 576.01 576.02

Plug 0.01 Low

B.M. 6.00 565.14

559.14

Hub 9+17.87

7+13.73

+11.66 576.80 576.80

Plug on Grade

Sept 28 - 1932

B.M. 7.53 567.15

559.62

Pipe 4° offset 8+17.15

6+48.05

+10.74 577.89 577.89

Plug on Grade

6+10.94

+11.36 578.51 578.51

Plug on Grade



567.15  
 5+67<sup>75</sup> +12.08 579.23 579.23 Plug on Grade

Sept 30 - 1932

B.M. 2.48 571.50 569.02

4. Hub 5+73<sup>13</sup>

5+22<sup>30</sup> +8.48 579.98 579.98 Plug to Grade

50<sup>88</sup>  
 5+22.30

4+73<sup>49</sup> +9.29 580.79 580.79 " "

Oct 1 - 1932

B.M. 6.73 575.75 569.02 Pipe 4+20<sup>59</sup>

4+20<sup>59</sup> +8.38 584.13 581.67 Plug 2.46 High

4+07<sup>24</sup> +6.14 581.89 581.89 Plug on grade

B.M. 4.80 574.78 569.98 Pipe 2+52<sup>93</sup>

3+26<sup>86</sup> +8.44 583.22 583.22 Plug on Grade

3+04<sup>94</sup> +8.81 583.59 583.59 Plug on Grade

2+68<sup>84</sup> +9.41 584.19 584.19 Plug on Grade



## Cut Stakes on Tunnel Outlet

Sept 27-1932

25

B.M.	0.58	549.90		549.32	
<sup>B</sup> S.W. Cor.			3.0	46.90	537.80 C 91
<sup>A</sup> N.W. Cor.			5.9	44.0	537.80 C 62
N.E. Cor. by portal			4.7	45.2	538.4 C 68

S.E. Cor. by portal			8.2	41.7	538.4 C 33
<sup>I</sup> S.W. Cor.			8.2	41.7	537.8 C 32
B.M.	0.83	550.15		549.32	
"C"			7.7	42.45	537.96 C 45
"D"			8.0	42.15	537.96 C 42
E			2.5	47.7	38.5 C 92

Sept 30

B.M.	7.76	548.65		540.89	
Set B.M.			7.96	540.69	12+82.77
A			4.7	44.0	537.80 C 62
B			1.8	46.9	537.80 C 91
C			6.2	42.5	538.0 C 45
D			8.2	40.4	538.0 C 24
E			2.25	46.4	538.5 C 79
F			5.5	43.1	38.4 C 41

571.25  
570.60  
65-

33<sup>.02</sup>/<sub>65</sub>-

	<del>548.6</del>	548.65				
G			6.3	542.3	538.4	C 32
H			5.7	42.9	38.5	C 44
I			5.9	42.7	37.8	C 49

571.25  
570.91  
34

Oct. 17-1934

Plug. 0+9496

B.M. 6.64 567.57 560.93

+7.9 575.5

B.M. 5.45 562.12 check on Lead & back sta. 0+17<sup>4</sup>  
Elev. 562.10

B.M. 4.02 566.12 562.10

+4.8 570.91

+5.1 571.25

B.M. 3.94 566.04 562.10

+4.6 570.6

B.M. 4.50 565.43 560.93

+6.6 572.0

B.M. 5.40 567.50 562.10

+8.0 575.5

Plug	-9.50	564.36		573.86	
9+17			5.2	59.2	563.03
9+22			5.4	59.0	562.95
					3.84p
					40

8+90	49
	26.51
9+17	00

Plug	-5.88	567.98		573.86	
9+27			9.1	58.9	562.87
+32			5.6	62.4	62.79
+37			4.4	63.6	62.70
+42			4.0	64.0	62.62
+47			3.6	64.4	62.54
					40
					0.4 up
					0.9 High
					1.4 High
					1.9 High

B.M. 0.75 567.97 567.22

Entrance Portal Structure  
Footing Grades.

B.M.	1.10	568.32	567.22	Footing excavation Grades
			10.32	558.0 ✓
			8.15	560.17
			7.39	560.93 ✓
			7.44	560.88
			7.54	560.78
			8.03	560.29
			8.39	559.93
			8.75	559.57
			9.11	559.21
			11.16	557.16
			8.98	559.34
			8.57	559.75

B.M.	1.05	568.27	567.22	
			7.98	560.29
			7.49	560.78
			7.34	560.93
			10.27	558.00
			8.70	560.17
			8.52	559.75

Rod 4<sup>57</sup> Cut 5<sup>70</sup>

568.27

8.93

559.34

9.35

558.92

8.70

559.57

8.34

559.93

9.06

559.21



179.59-60  
107 21-15  
72-38-45

Concrete Grades & R.P.s

Oct 20

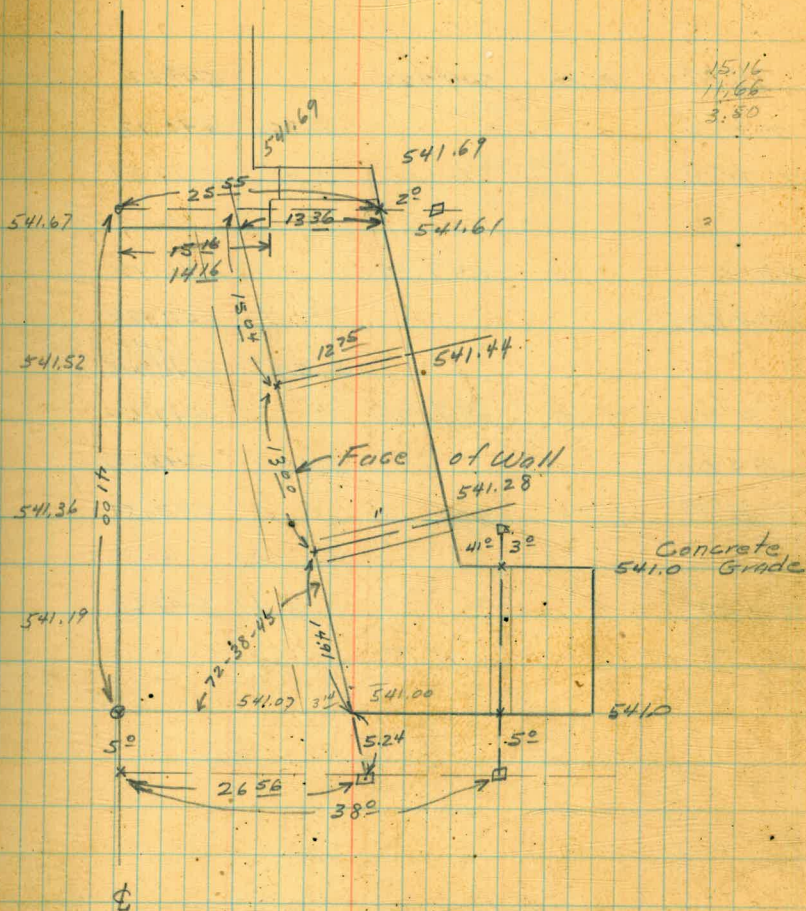
B.M. 0.33 549.65 549.32  
8.65 541.00

Oct 21

B.M. 0.68 550.0 549.32  
8.72 41.28  
8.56 41.44  
8.39 41.61  
8.31 41.69  
8.33 41.67  
8.48 41.52  
8.64 41.36  
8.81 41.19  
8.93 41.07  
9.00 41.0

Oct 20 - 1932

31



15.16  
11.66  
3.50

105.1300  
105.250  
210  
125

Oct 22-1932  
Div. Tunnel

Elliott  
Soper  
Remmen

32

B.M.	0.60	549.92		549.32
T.P. "A"			3.80	546.12
T.P. "B"			2.11	547.81
T.P. "A"	1.86	547.98		546.12
11+60			5.10	542.88
				1.46
			3.64	544.34
T.P. "B"	1.89	549.70		547.81
10+60			3.69	546.01
T.P. "B"	3.32	551.13		547.81
9+60			3.46	547.67
		4.14		

544.72
0.17
544.55
1.46
546.01

01667

546.21  
1.46

Oct 24 - 1932

Elliott Notes & Level  
 Simpson T  
 Soper Hd. Ch  
 Kemmen T. Ch

B.M.	2.41	551.73		549.32
			7.32%	544.40%
	4.19%	548.60		
		548.54		
T.P.			1.60%	546.99%
11 + 60			0.75	547.85
			4.26	44.34
+ 40			3.73	44.67
+ 20			3.58	45.02
11 + 00			3.25	45.35
10 + 80			2.92	45.68
+ 60			2.59	46.02
+ 40			2.25	46.35
+ 20			1.92	46.68
10 + 00			1.51	47.01
+ 80			1.20	47.34
+ 60			0.86	47.68
+ 40			3.25	48.01
+ 20			2.92	48.34
9 + 00			2.57	48.67

551.26 ↑ 551.26  
 47.68

50.84  
 47.68  
 3.16

547.00  
 3.84  
 550.84  
 48.01  
 2.83  
 50.84  
 47.96  
 2.88

0.246 on 50.

551.26

8+80

2.26 549.00

+60

1.92 49.34

+50

+40

1.59 49.67

+20

50.00

8+17<sup>15</sup>

50.05

7+80

B.M.

4.26

↑  
551.26

547.00

+4

8+192<sup>9</sup>

550.01

549.34

3.14

52.48

50.01

2.47

3.14

2.47

0.67

548.55

1.46

550.01

Oct 25 - 1932

B.M.	1.34	548.34	547.00
		<del>8.9</del>	
	9.9	538.43	
	11.67	536.67	
	10.0	38.25	
	11.67	36.67	
	<del>35</del>		
	10.1	38.23	
	10.16	38.18	
	10.32	38.02	
	10.39	37.95	
	<del>9.88</del>		
	10.59	37.75	
	<del>7.29</del>		
	10.53	37.81	
	16.34	32.0	

N. 1/2 of outlet structure <sup>35</sup>

8-13<sup>5</sup>/<sub>8</sub>  
-13

C. 4L	F. 03	11.67	
	C. 15	<u>7.63</u>	10.0
	F. 04	4.04	7.6
	C. 13		
	C. 12		
	F. 04		
	C. 05		
	C. 30		
	C. 20		

Oct 24 - 1932

B.M. 5.54 580.52 574.98

11.80 568.72

1.39 570.11

Set B.M. 7.80 562.31

5.12 567.43

2.50

3

5.43 62.00

10

5.45 61.98

20

5.49 61.94

30

5.55 61.88

40

5.66 61.77

50

5.85 61.58

6.16

4.93 62.50

5.43 62.00

36

67.43

6.10

61.33

67.43

560.97

6.46

Pipe 0-50

F 0 71

F 1 23

F 0 73

Grades on Crown Timber

B.M. 2.75 549.75 547.00

111.53 +18.92 568.67

+50 +18.97 568.72

+47<sup>2</sup> +19.02 568.77

40<sup>8</sup> +19.12 568.87

34<sup>7</sup> +19.23 568.98

28<sup>2</sup> +19.33 569.08

22<sup>6</sup> +19.43 569.18

16<sup>6</sup> +19.53 569.28

13<sup>7</sup> +19.57 569.32

B.M. 2.58 549.58 547.00

13<sup>2</sup> +18.98 568.56

4.82  
13.16

Nov 9-1932

Elliott

Simpson

Soper

Remmen

37

Finish Floor.

543.05  
25.67  
568.72

Nov 10 - 1932  
Grades on Timber

B.M.	3.91	550.91	547.00
11 + 10 <sup>6</sup>		19.80	569.38
"		18.04	567.62
"		11.89	562.80
11 + 04 <sup>6</sup>		19.90	569.48
		18.14	567.72
			562.70
10 + 98 <sup>6</sup>		+18.67	569.58
		+16.91	567.82
			563.00
+92 <sup>5</sup>		+18.77	569.68
		+17.01	567.92
			563.10
+86 <sup>5</sup>		+18.87	569.78
		+17.11	568.02
			563.20
+80 <sup>5</sup>		+18.97	569.88
		17.21	568.12
		12.39	563.30

38

B.M. 54760

258

549.58

69.48

49.58

19.90

1.76

18.14



Spring Line

.01667  
 29.3  
 5001  
 15003  
 50.01  
 .655131

B.M. 2.94 = 549.94

547.00

5.61 555.55  
 5.66  
 5.7

B.M.	3.01	550.01	547.00
11+106			62.80
+046			64.57
10+986			62.90
+925			64.67
+865			63.00
+805			64.77
			63.10
			64.57
			63.20
			64.77
			63.30
			65.07

B.M.	2.94	549.94	547.00
11+53			12.15 562.09
+50			16.97 562.14
+472			17.02 562.19
+408			12.25 562.29
+343			17.07 562.29
+283			12.35 562.29
+226			12.46 562.40
+166			12.56 562.50
+132			12.66 562.60
			12.76 562.70
			12.80 562.74

Nov 11 - 1932

Grown

14

1/2

Spring

B.M. 3.50

550.50

547.00

10+74<sup>5</sup>

<sup>19.48</sup> 569.98

<sup>17.72</sup> 568.22

<sup>12.90</sup> 63.40

<sup>4.31</sup> 56.81

+68<sup>5</sup>

570.08

+62<sup>3</sup>

570.18

+56<sup>3</sup>

<sup>19.78</sup> 570.28

<sup>18.02</sup> 568.52

<sup>13.20</sup> 63.70

<sup>6.41</sup> 57.11

+50<sup>3</sup>

<sup>1.76</sup> 570.39

+48<sup>2</sup>

570.47

+39<sup>2</sup>

<sup>20.07</sup> 570.57

<sup>18.31</sup> 568.81

<sup>13.49</sup> 63.99

<sup>6.90</sup> 57.40

Spring Line

B.M. 3.46

550.46

547.00

11+53

5.04

558.50

11+22<sup>6</sup>

5.55

556.00

10+74<sup>5</sup>

6.35

556.81

B.M. 0.71 547.71

547.00

Nov 12 - 1932

41

11+56<sup>2</sup>

Crown  
20.91  
568.62  
47.71

1.26  
1/4  
19.15  
66.86  
47.71

6.58  
1/2  
14.33  
62.04  
47.71

13.17  
Spr. Line  
7.74  
55.46  
47.71

11+59<sup>2</sup>

20.86  
568.57  
47.71

19.10  
66.81  
47.71

14.28  
61.99  
47.71

7.67  
55.40  
47.71

B.M. 2.96 549.96

547.00

T.P. 3.94 552.19

1.71

548.25

10+39<sup>3</sup>

18.38  
570.57  
52.19

68.81  
70

63.99  
70

57.40  
70

.0166  
.3  
.0498

T.P. 4.35 552.60

548.25

9+97

18.67  
571.27  
52.66  
6.58

17.2  
569.51

12.09  
64.69  
52.60

5.50  
58.10  
52.60

545.60  
35.67  
571.27

Nov 14 - 1932

B.M. 548.25

T.P. 4.63 52.88

548.25

9+97

18.39  
571.27  
52.88

569.51

564.69  
61

558.10  
61

4.33  
552.58

9+66<sup>8</sup>

18.89  
571.27  
52.88

17.13  
570.01  
58.88

565.19

558.60

Spring Line  
Nov. 17-1932

B.M. 4.02 566.33 562.31

0+15<sup>8</sup> + 8.07 574.40

0+58<sup>L</sup> + 7.36 573.69'

74.4

42

Profile of Timbers Tunnel Entrance  
Top cap pieces only.

Nov. 18, 1932

43

B.M.	1.45	566.76	Elev.	Grade	
0 + 13 <sup>8</sup>		+ 20.83	87.59	87.57	.02 H
+ 19 <sup>0</sup>		+ 20.10"	87.43	87.57	.14 L
+ 25 <sup>0</sup>		+ 20.67"	87.28	87.43	.15 L
+ 31 <sup>0</sup>		+ 20.52"	87.19	87.43	.24 L
+ 37 <sup>0</sup>		+ 20.64"	87.07	87.31	.24 L
+ 43 <sup>0</sup>		+ 20.43"	86.94	87.21	.27 L
+ 46 <sup>0</sup>		+ 20.54"	86.90	87.11	.21 L
+ 51 <sup>8</sup>		+ 20.31"	86.84	87.06	.22 L
+ 58 <sup>1</sup>		+ 20.18"	86.84	86.96	.12 L
+ 64		+ 20.14"	86.72	86.84	.12 L
+ 70 <sup>2</sup>		+ 20.14"	86.64	86.72	.08 L
+ 76 <sup>2</sup>		+ 20.08"	86.64	86.66	.02 L
+ 82 <sup>2</sup>		+ 19.76"	86.53	86.56	.03 L
+ 88 <sup>1</sup>		+ 19.11 <sup>1</sup> / <sub>2</sub> "	86.48	86.46	.02 H
+ 94 <sup>0</sup>		+ 19.88"	86.43	86.36	.07 H
1 + 00 <sup>2</sup>		+ 19.10 <sup>1</sup> / <sub>2</sub> "	86.23	86.26	.03 L
+ 06 <sup>2</sup>		+ 19.77"	86.16	86.16	00
+ 12 <sup>2</sup>		+ 19.72"	86.08	86.06	.02 H
+ 18 <sup>2</sup>		+ 19.94"	86.01	85.96	.05 H
+ 24 <sup>3</sup>		+ 19.72"	85.99	85.86	.13 H
+ 30 <sup>3</sup>		+ 19.85"	85.85	85.76	.09 H
+ 33 <sup>9</sup>		+ 19.67"	85.72	85.66	.06 H
+ 39 <sup>9</sup>		+ 19.47"	85.57	85.61	.04 L
		+ 19.55 <sup>1</sup> / <sub>8</sub> "	84.98	85.51	.53 Low

	566.76					
1+45 <sup>9</sup>		18.53 <sup>11</sup>	Elev.	Grade		
+51 <sup>8</sup>		+18'6 <sup>7</sup> / <sub>8</sub>	85.34	85.41	.07	L ✓
T.P.		18.21	85.07	85.31	.24	L ✓
		+18'3 <sup>3</sup> / <sub>4</sub>	2.98	563.78		on South Plum Post 1+51 <sup>8</sup>

	2.18	565.96				
+58 <sup>2</sup>		18.97	84.93	85.20	.27	L ✓
+63 <sup>2</sup>		+18'11 <sup>5</sup> / <sub>8</sub>	84.97	85.12	.15	L ✓
+69 <sup>4</sup>		19.01	84.87	85.02	.15	L ✓
+75 <sup>5</sup>		+18'10 <sup>7</sup> / <sub>8</sub>	84.94	84.92	.02	H ✓
+78 <sup>5</sup>		18.98	84.82	84.87	.05	L ✓
+84 <sup>8</sup>		+18'11 <sup>3</sup> / <sub>4</sub>	84.74	84.77	.03	L ✓
+90 <sup>7</sup>		18.86 <sup>3</sup> / <sub>4</sub>	84.50	84.67	.17	L ✓
+96 <sup>8</sup>		+18'10 <sup>8</sup> / <sub>8</sub>	84.32	84.57	.25	L ✓
T.P.		18.78	3.59	562.37		on South Plum Post 2+63 <sup>6</sup>

	0.46	562.83				
Set B.M.		3.24	559.59			Set B.M. spike in first Plum Post East of Angle
	3.23	562.82				point (At 20 <sup>59</sup> ) on South Side Tunnel
		0.45	562.37			= check on T.P. 2+63 <sup>6</sup>
	3.76	566.13				
		2.35	563.78			= check on T.P. 1+51 <sup>8</sup>

	2.35	566.13				
2+02 <sup>5</sup>		+ 18.17	84.30	84.46	.16	L ✓
+08 <sup>8</sup>		+ 17.90	84.03	84.36	.33	L ✓
+13 <sup>0</sup>		+ 18.00	84.13	84.28	.15	L ✓
+19 <sup>2</sup>		+ 17.99	84.12	84.18	.06	L ✓
+25 <sup>2</sup>		+ 17.82	83.95	84.08	.13	L ✓

	566.13	Elev.	Grade	
2+29 <sup>4</sup>		+ 17.74	583.87 ✓	84.01 ✓
+ 35 <sup>8</sup>		+ 17.75	83.88 ✓	83.91 ✓
+ 41 <sup>2</sup>		+ 17.60	83.73 ✓	83.82 ✓
+ 46 <sup>6</sup>		+ 17.50	83.63 ✓	83.73 ✓
+ 52 <sup>6</sup>		+ 17.46	83.59 ✓	83.63 ✓
+ 58 <sup>6</sup>		+ 17.42	83.55 ✓	83.53 ✓
+ 64 <sup>6</sup>		+ 17.34	83.47 ✓	83.43 ✓
+ 70 <sup>6</sup>		+ 17.20	83.33 ✓	83.33 ✓
+ 76 <sup>5</sup>		+ 17.11	83.23 ✓	83.23 ✓
+ 82 <sup>6</sup>		+ 16.93	83.06 ✓	83.13 ✓
+ 88 <sup>7</sup>		+ 16.88	83.01 ✓	83.03 ✓
+ 94 <sup>8</sup>		+ 16.78	82.91 ✓	82.93 ✓
T.P.		2.35	563.78	
	3.01	566.79		
B.M.		4.48	562.31	check on B.M. El. 562.31
	0.36	562.73	562.37	T.P. on Plum Post 2+63 <sup>6</sup>
3+00 <sup>6</sup>		+ 20.08	82.81 ✓	582.83 ✓
+ 07 <sup>0</sup>		+ 19.96	82.69 ✓	82.73 ✓
+ 12 <sup>8</sup>		+ 19.82	82.55 ✓	82.63 ✓
+ 20 <sup>0</sup>		+ 19.88	82.61 ✓	82.51 ✓
+ 27 <sup>0</sup>		+ 19.77	82.50 ✓	82.39 ✓
+ 34 <sup>9</sup>		+ 19.54	82.27 ✓	82.26 ✓
+ 42 <sup>8</sup>		+ 19.43	82.16 ✓	82.13 ✓
+ 49 <sup>7</sup>		+ 19.33	82.06 ✓	82.01 ✓
+ 56 <sup>7</sup>		+ 19.17	81.90 ✓	81.89 ✓

562.73

Elev. Grade

3+62 <sup>6</sup>	+19.02	581.75	81.79	.04 L
+69 <sup>±</sup>	+18.90	81.63	81.67	.04 L
+76 <sup>8</sup>	+18.80	81.53	81.56	.03 L
+83 <sup>±</sup>	+18.77	81.50	81.45	.05 H
+90 <sup>°</sup>	+18.65	81.38	81.35	.03 H
+97 <sup>7</sup>	+18.63	81.36	81.28	.14 H
4+05 <sup>8</sup>	+18.52	81.25	81.08	.17 H
+11 <sup>8</sup>	+18.38	81.11	80.98	.13 H
+17 <sup>±</sup>	+18.28	81.01	80.88	.13 H

3.15 559.58 = check on B.M. at Angle point E. 559.59

Nov 25 - 1932

Elliott Notes  
Simpson T. Hatch,  
Soper  
Remmen R. Ch

B.M. 0.66 560.25 559.59

4+23 <sup>±</sup>	+20.53	580.78	80.78	.00
+31 <sup>6</sup>	+20.54	80.79	80.65	.14 H
+39 <sup>8</sup>	+20.47	80.72	80.52	.20 H
+47 <sup>8</sup>	+20.18	80.43	80.38	.05 H
+55 <sup>8</sup>	+20.05	80.30	80.25	.05 H
+64 <sup>°</sup>	+19.82	80.07	80.11	.04 L
+71 <sup>9</sup>	+19.69	79.94	79.78	.04 L
+80 <sup>°</sup>	+19.58	79.83	79.85	.02 L
+88 <sup>1</sup>	+19.39	79.64	79.71	.07 L
+96 <sup>°</sup>	+19.21	79.46	79.58	.12 L
5+07 <sup>°</sup>	+19.07	79.32	79.40	.08 L



560.25

58

Elev. Grade

5+14 <sup>0</sup> <sub>6</sub>	+18.95	579.20 <sup>✓</sup>	79.22 <sup>✓</sup>	0.08 <sup>✓</sup> L <sup>✓</sup>
+22 <sup>-</sup>	+18.95	579.20 <sup>✓</sup>	79.13 <sup>✓</sup>	.07 <sup>✓</sup> H <sup>✓</sup>
+27 <sup>6</sup>	+18.90	579.15 <sup>✓</sup>	79.06 <sup>✓</sup>	.09 <sup>✓</sup> H <sup>✓</sup>
+30 <sup>6</sup>	+18.95	579.20 <sup>✓</sup>	79.01 <sup>✓</sup>	.19 <sup>✓</sup> H <sup>✓</sup>
+33 <sup>2</sup>	+18.78	579.03 <sup>✓</sup>	78.96 <sup>✓</sup>	.07 <sup>✓</sup> H <sup>✓</sup>
+38 <sup>5</sup>	+18.70	578.95 <sup>✓</sup>	78.88 <sup>✓</sup>	.07 <sup>✓</sup> H <sup>✓</sup>

B.M.

4.97 555.28 555.25

NOV. 19, 1932

B.M. 4.42 559.67 555.25

5+46 <sup>3</sup>	+19.12	78.79 <sup>✓</sup>	78.75 <sup>✓</sup>	.04 <sup>✓</sup> H <sup>✓</sup>
+54 <sup>3</sup>	+18.91	78.58 <sup>✓</sup>	78.62 <sup>✓</sup>	.04 <sup>✓</sup> L <sup>✓</sup>

East Face  
 Profile of Crown Timbers  
 Nov. 19, 1932

	559.67	Elev.	Grade	
5+62 <sup>0</sup>	+18.90	578.57	78.14	.08 High
70 <sup>2</sup>	+18.72	578.39	78.35	.04 H
3.07	557.24	5.50	554.17	
+76 <sup>2</sup>	+20.96	578.20	78.25	.05 L
+81 <sup>2</sup>	+20.83	78.07	78.17	.10 H
+87 <sup>2</sup>	+20.91	78.15	78.07	.08 H
+93 <sup>2</sup>	+20.82	78.06	77.97	.09 H
6+00 <sup>2</sup>	+20.78	78.02	77.86	.16 H
+07 <sup>4</sup>	+20.57	77.81	77.74	.07 H
+15 <sup>5</sup>	+20.33	77.57	77.60	.03 L
+23 <sup>6</sup>	+20.28	77.52	77.47	.05 H
+31 <sup>2</sup>	+20.24	77.48	77.34	.14 H
+39 <sup>4</sup>	+20.08	77.32	77.20	.12 H
+47 <sup>3</sup>	+19.93	77.17	77.07	.10 H
+55 <sup>5</sup>	+19.74	76.98	76.94	.04 H
+62 <sup>4</sup>	+19.53	76.77	76.82	.05 L
+69 <sup>6</sup>	+19.15	76.39	76.70	.31 L
+75 <sup>7</sup>	+19.06	76.30	76.60	.30 L
+81 <sup>8</sup>	+19.29	76.53	76.50	.03 H
+87 <sup>8</sup>	+19.37	76.61	76.40	.21 H
+93 <sup>8</sup>	+19.27	76.51	76.30	.21 H
6+98 <sup>9</sup>	+19.21	76.45	76.22	.23 H
B.M.	4.67	552.57	= check on	B.M.

West Face of Timbers  
Profile of Crown Timbers  
Exit Portal

Nov. 18, 1932

49

8450.00  
8417.15  
32.85

B.M.	4.61	551.61		547.00	
Set B.M.			3.02	548.59 <sup>58</sup>	on Bolt, South side of concrete invert, sta. 9+47
	5.29	553.88			
Set B.M.			3.27	550.61 <sup>60</sup>	on Bolt, South side of concrete invert, sta. 8+25
	3.70	554.31			
Set B.M.			1.73	552.58 <sup>57</sup>	spike in first Plum post in timbered section East of sta. 6+752
	5.17	557.75			Angle point 8+17 <sup>45</sup> -
T.P.			2.49	555.26 <sup>25</sup>	Spike in Post 30. Side 5+762
	2.44	557.10			
	4.45 <sup>1/2</sup>	555.03 <sup>1/2</sup>	7.12	550.58	
T.P. B.M.	3.22 <sup>1/2</sup>	551.82 <sup>1/2</sup>	6.43 <sup>1/2</sup>	548.60	
B.M.			4.81	547.01 <sup>1/2</sup>	547.00
B.M.	3.22	550.22		547.00	
10+80 <sup>5</sup>			+19.38	69.60	569.89
+86 <sup>5</sup>			+19.32	69.54	69.79
+92 <sup>5</sup>			+19.35	69.57	69.69
+98 <sup>6</sup>			+19.32	69.54	69.59
11+04 <sup>6</sup>			+19.21	69.43	69.49
+10 <sup>6</sup>			+19.08	69.30	69.39
+13 <sup>7</sup>			+18.80	69.02	69.34
+16 <sup>6</sup>			+18.71	68.93	69.29
+22 <sup>6</sup>			+18.68	68.90	69.18
+28 <sup>7</sup>			+18.71	68.93	69.08
+34 <sup>7</sup>			+18.63	68.85	568.98
			3.22	547.00	check on B.M.

West Face  
Profile of Crown Timbers  
Cont.

Nov. 29-1932

50

B.M.	4.54	551.54	Elev.	Grade	
9+62 <sup>3</sup>		+ 20.13	571.67	71.85	.18 Low
+66 <sup>1</sup>		+ 19.95	71.49	71.77	.28 L
+73 <sup>0</sup>		+ 19.87	71.41	71.67	.26 L
+79 <sup>0</sup>		+ 19.63	71.17	71.57	.40 L
+85 <sup>0</sup>		+ 19.43	70.97	71.47	.50 L
+91 <sup>0</sup>		+ 19.48	71.02	71.37	.35 L
+97 <sup>0</sup>		+ 19.58	71.12	71.27	.15 L
+03 <sup>0</sup>		+ 19.56	71.10	71.17	.07 L
10+09 <sup>2</sup>		+ 19.33	570.87	71.07	.20 L

B.M.	1.30	553.87		552.57
8+17 <sup>15</sup>			3.82	550.05
8+00			3.54	550.33

548.59	01667	548.87
1.46	20	1.46
550.05	33340	550.33

7+80			3.21	550.66
------	--	--	------	--------

7+60			2.87	551.00
------	--	--	------	--------

7+40			2.54	551.33
------	--	--	------	--------

7+20			2.20	551.67
------	--	--	------	--------

7+00			1.87	551.99
------	--	--	------	--------

6+80			1.54	552.32
------	--	--	------	--------

B.M.	3.26	555.83		552.57
B.M.	4.26	556.83		552.57
6+60			3.17	552.66
			4.17	

6+40			2.84	552.99
------	--	--	------	--------

6+20			3.84	
			2.51	553.32

6+00			3.51	
			2.17	553.66

5+80			3.17	
			1.84	553.99

5+60			2.84	
			1.51	554.32

5+40			2.51	
			1.18	554.65
			2.18	

553.02	01667
114	2
554.48	3334
16	

554.48
17
65

14666
15   249
15
99
90
90

# Stations of E. Face of Posts in Div. Tunnel

Elliott - Notes  
Simpson - Sta.  
Super-Terrim m ch.

South Lt.	North Trl.	Lt.	Trl.	Lt.	Trl.	Lt.	Trl.	Notes	Trl.	Lt.	Trl.	
10x10-12 10x12-35 0+160 10x10-12 H9°	10x12-14 6x12-25 0+159	10x12-14 1+63	10x12-14 1+63	10x12-14 3+05	8x8°-5E 3+065	10x12-14 5+042	10x12-14 5+06	10x12-14 8x8-13 6+88		10+796	10+797	
10x10-12 735°	10x12-14 3x12-25 +250	10x12-14 +69	10x12-14 +694	10x12-14 +14	1' Post +125	10x12-14 +12	10x12-14 +118	10x12-8 6+475		+785	+856	
10x12-12 10x12-3 10x12-3	10x12-14 10x12-3 3x12-25 +310	10x12-14 +73	10x12-14 +756	10x12-14 +255	10x12-13 3x12-25 4776	10x12-14 +212	10x12-14 +20	10x12-3 6+99°	↑	+916	+932	
10x12-14 +37	10x12-14 4x12-25 +39	10x12-14 +784	10x12-14 +848	10x12-14 +31	10x12-14 +349	10x12-14 +282	10x12-14 +278			10+972	+978	
10x12-14 +43	10x12-14 12x12-25 +430	10x12-14 +846	10x12-14 +907	10x12-14 +372	10x12-14 +605	10x12-14 +322	10x12-14 +392	Not Timbered		11+043	11+036	
10x12-14 +52	10x12-14 4x12-25 +518	10x12-14 +884	10x12-135 1+96	10x12-14 +486	10x12-57 +670	10x12-14 +362	10x12-14 +462			4' +095	+097	
+582	+581	10x12-14 1+96	10x12-14 +072	10x12-14 +65	10x10-10 +752	10x12-14 +458	10x12-14 +542			3 1/2' +128	+122	
+643	+640	10x12-14 2+012	10x12-14 +13	10x12-14 +722	10x12-14 +776	10x12-14 +60	10x12-14 +702			4' +165	+157	
+703	+702	10x12-14 +072	10x12-14 +188	10x12-14 +80	10x12-14 +872	10x12-14 +692	10x12-14 +782				+218	+212
10x12-14 +76	10x12-14 +76	10x12-14 +122	10x12-14 +242	10x12-14 +863	10x12-14 +99	10x12-14 +751	10x12-14 +87				+278	+276
10x12-14 +82	10x12-14 0+942	10x12-14 +190	10x12-14 +30	10x12-14 3+92	10x12-14 +058	10x12-14 +80	10x12-14 5+942				+338	+332
10x12-14 +88	10x12-14 1+002	10x12-14 +232	10x12-14 +357	10x12-14 4+008	10x12-14 +112	8x8-3 +870	10x12-14 6+005				+398	+398
10x12-11/6 Post +943	10x12-14 +06	10x12-13 +294	10x12-14 +43	10x12-14 +083	10x12-14 +477	10x12-14 +905	10x12-14 +075				+457	+458
10x12-14 0+985	10x12-14 +155	10x12-14 +352	10x12-14 +52	10x12-14 +170	10x12-14 +29	10x12-14 5+962	10x12-14 +158				+487	+482
1+066	+183	10x12-14 +428	10x12-14 +585	10x12-14 +238	10x12-14 +372	10x12-14 6+042	10x12-14 +238				+132	+108
1+133	+242	10x12-14 +498	2-2 Post +635	10x12-14 +32	10x12-14 +475	10x12-14 7102	10x12-14 +312				+202	+260
+182	+332	10x12-14 +57	10x12-2 8x8-25 +77	10x12-14 +392	10x12-14 +572	10x12-14 +776	10x12-14 +392				+260	+322
+242	+332	10x12-14 +762	10x12-14 +762	10x12-14 +470	10x12-14 +650	10x12-14 +227	10x12-14 +478				+382	+326
10x12-135 +305	10x12-14 +398	10x12-14 +702	10x12-2 10x12-21 +80	10x12-14 +573	10x12-14 +732	10x12-14 +353	10x12-14 +552				+442	+386
10x12-13 +380	10x12-14 +459	10x12-14 +765	10x12-3 +835	10x12-14 +642	10x12-14 +82	10x12-14 +423	10x12-13 +632				+492	+444
10x12-14 +444	10x12-14 +496	10x12-14 +89	2-3 Post +890	10x12-14 +740	10x12-2 10x12-25 +86	10x12-14 +512	10x12-14 +702				+555	+497
10x12-14 +513	10x12-14 +532	10x12-14 2+943	10x12-14 2+944	10x12-14 +82	10x12-14 4+90	10x12-14 +61	10x12-14 +76				+612	+755
10x12-12 +564	10x12-12 +582	14' 3+005	14' 3+005	10x12-14 4+90	10x12-14 +978	10x12-14 +690	10x12-14 +82				+674	+615
	10x12-15					10x12-14 +757	10x12-14 +88				+742	+675
							10x12-14 +99				+732	

- N 0+82 - 10x12-15
- N 0+88 - 10x12-05
- N 3+27 - 10x12-7
- N 4+33 - 6x6-6
- N 4+35 - 10x12-3

B.M.	2.01	565.79		563.78
0+20			2.51	563.28
0+40			2.84 34	562.95
0+60			3.18 33	562.61
0+80			3.51	562.28
1+00			3.84	561.95
+01			3.86	61.93
+20			4.17	61.62
+40			4.50	61.29 34
+60			4.84	60.95

Nov 28 - 1932

B.M.	0.45	560.04	4.17	559.59
4+20 <sup>59</sup>			3.71 <sup>18</sup>	556.63
B.M.	0.09	559.68		
	0.07	559.66	4.50	559.59
4+40			3.35	556.31
4+60			3.69	555.97
4+80			4.02	555.64
+98			4.34	55.34
5+00			4.35	555.31
5+20			4.68	554.98
5+40			5.01	554.65

61.32	60.49
1.46	1.46
62.78	61.95

58.83
1.46
60.29

555.17
1.46
556.63

559.59
0.92
560.51
56.63
3.88

553.85
1.46
555.31

Nov 29-1932

54

4 + 18.34  
98.48  
 3 + 19.86

B.M.	1.74	561.33		559.59
4 + 00			4.36	556.97
+83			4.08	557.30
3 + 80			3.77	557.63
+64			3.36	557.97
+60			3.03	558.30
+40				
+20				

43.58  
57.97  
 5.61

557.17 555.51  
1.46 1.46  
 558.63 556.97

B.M.	1.17	563.54		562.37
3 + 00			4.91	558.63
2 + 80			4.58	558.96
2 + 60			4.25	559.29
2 + 40			3.91	559.68
2 + 20			3.58	559.96
2 + 00			3.25	560.29
1 + 80			2.92	560.62
1 + 60			2.59	560.95

5.39  
 5.8

0.166 0.167  
3 4  
 0.498 0.668

558.83  
1.46  
 560.29

563.54  
560.95  
 2.59

B.M. 562.37  
0.36  
 562.73  
58.96  
 3.77

B.M.	1.58	565.36		563.78
1 + 40			4.07	561.29
1 + 29			3.89	561.47
1 + 20			3.73	561.62
1 + 03			3.46	561.90
0 + 80				562.29
0 + 72				562.62
0 + 60				562.62
0 + 56				562.68

0.1667  
13  
 1.669  
 1.667

0.1667  
3  
 0.5001

560.44  
1.46  
 561.90



Nov 30-1932

B.M. 3.10 562.69 559.59

4+20<sup>52</sup> 556.63

4+00 556.97

3+80 557.30

3+60 557.63

3+40 4.72 557.97

3+20 4.39 558.30

3+00 4.06 558.63

+77 3.67  
2+80 3.72 558.97

2+60 8.39 559.30

2+40 3.06 559.63

2+20 559.96

2+00 560.29

1+80 560.62  
B.M. 1.84 565.62 563.78  
+60 560.95

+40 4.33 561.29

1+29 4.15 561.47 Cut

1+03 3.72 561.90 Cut

0+80 3.33 562.29

0+72 3.20 562.42 Cut

0+56 2.94 562.68 Cut

0+40 2.66 562.96

0+20 2.33 563.29

64.63  
64.37  
26

01667  
26  
10002  
3334  
43

01667  
14  
6668  
1667  
23338  
01667  
23  
5001  
3334  
3834

55

1703  
72

63.29  
17

63.46  
75

64.21

29  
72

01667  
8  
13336  
0167  
3  
0.501

565.66  
1.87  
63.79

01667  
26  
10002  
3334

1667  
1667  
4.298337  
4.15  
14

01667  
16  
10002  
1667  
26672

8.18 4.75

4.24  
3.94  
0167  
23  
501  
334

4.42  
3.72

35

560.44  
11.46

62.16  
33  
61.83  
1.46  
63.29

63.46  
75  
64.21

Grade  
Dec 7-1932

B.M.	3.64	554.24	550.60
9+50		+4.64	58.88
+40		+4.81	59.05
+30			59.22
+30		+4.98	59.22
+20		+5.15	59.39
+10		+5.31	59.55
9+00		+5.47	59.71
B.M.	3.75	554.35	550.60
8+90		+5.53	59.88
+80		+5.70	60.05
+70		+5.86	60.21
B.M.	4.36	554.96	550.60
8+60		+5.42	60.38
+50		+5.58	60.54
8+40		+5.75	60.71

Note: Sections from 9+10 to 9+50 56  
Measured with 13 1/2 radius. All others with 14 1/2 Radius

Lt. These Sections with 13 1/2 Radius

17 37 31 18 27 16 17 23 33 24 13 13 07  
90 75 60 45 30 15 15 30 45 60 75 90

14 03 20 18 45 28 16 15 33 19 03 09 12 15  
90 75 60 45 30 15 15 30 45 50 60 75 90

22 24 00 27 20 23 12 11 12 24 06 40 07  
90 75 60 45 30 15 15 30 45 60 75

00 00 17 06 10 00 10 22 16 40 04  
75 60 45 30 15 15 30 45 60 75

00 14 52 24 00 00 00 00 24 12 11  
75 60 45 30 15 15 30 45 60 75

C13 C04 4L 04 C13 C10 C03 02 00 05 C03  
75 60 45 30 15 15 30 45 60 75

C02 02 23 24 13 00 14 05 05 C03 C05  
75 60 45 30 15 15 30 45 60 75

08 02 10 37 23 15 13 C02 C02 C05 C12  
75 60 45 30 15 15 30 45 60 75

C02 C12 00 03 24 12 10 C04 C02 00 C10  
75 60 45 30 15 15 30 45 60 75

C10 00 08 25 48 33 31 22 00 C11 C02  
75 60 45 30 15 15 30 45 60 75

00 00 00 27 22 23 23 15 19 06 03  
75 60 45 30 15 15 30 45 60 75

C00 00 00 04 14 27 25 04 05 00 C08  
75 60 45 30 15 15 30 45 60 75

Dec. 9 - 1932

Springline

B.M. 4.70 555.30 550.60

8+30 +5.57 560.87

8+17<sup>15</sup> on split Angle +5.80 561.10

B.M. 5.58 556.18 550.60

8+10 +5.02 561.20

8+00 +5.19 561.31

7+90 +5.36 561.54

7+80 +5.52 561.70

7+70 +5.69 561.87

7+60 +5.85 562.03

7+50 562.20

Li.

4

Rt.

5

549.70  
12.50  
562.20

C12 10 02 02 12 28 16 14 14 07 04  
75 60 45 30 15 15 30 45 60 75

C03 C15 C09 05 24 26 23 20 23 09 07  
75 60 45 30 15 15 30 45 60 75

15 04 10 14 15 15 02 02 C18 C19 C10  
75 60 45 30 15 15 30 45 60 75

02 15 22 20 00 00 00 C20 C20 C14 C14  
75 60 45 30 15 15 30 45 60 75

F24 F18 F22 F34 F10 C05 C10 C22 C31 C22 C32 48.87  
75 60 45 30 15 15 30 45 60 75 12.50  
61.37

13 10 06 19 F08 C05 C12 C24 C20 C20 C33  
75 60 45 30 15 15 30 45 60 75

13 15 10 F12 C12 C12 C04 C08 C10 C25 C32  
75 60 45 30 15 15 30 45 60 75

C05 06 01 04 02 02 20 40 34 16 00  
75 60 45 30 15 15 30 45 60 75

Dec 10 - 1932

58

B.M.	4.87	555.47	550.60
------	------	--------	--------

7+50		+ 6.73	562.20
------	--	--------	--------

7+40		+ 6.90	562.37
------	--	--------	--------

7+30		+ 7.07	562.54
------	--	--------	--------

B.M.	5.42	556.02	550.60
------	------	--------	--------

7+20		+ 6.68	562.70
------	--	--------	--------

7+10		+ 6.85	562.87
------	--	--------	--------

7+00

Lt.

Tst.

0°	0°	0°	15	15	06	08	26	24	24	20
75	60	45	30	15	0	15	30	45	60	75

0°	08	00	07	09	10	30	38	40	35	13
75	60	45	30	15	0	15	30	45	60	75

0°	0°	03	15	29	22	20	14	18	4	20
75	60	45	30	15	0	15	30	45	60	75

01°	06	13	08	02	11	02	08	02	18	15
75	60	45	30	15	0	15	30	45	60	75

04	12	13	24	23	02	05	05	08	31	30
75	60	45	30	15	0	15	30	45	60	75





## Spring Line

4+20<sup>59</sup>

567.67

+29

67.53

+39<sup>8</sup>

67.38

+47<sup>6</sup>

67.25

+57<sup>2</sup>

67.08

+65

+73<sup>3</sup>

+82

+86

4 +90<sup>8</sup>

5 +06

+11<sup>8</sup>

+20

+27<sup>8</sup>+39<sup>2</sup>+46<sup>1</sup>+54<sup>3</sup>+62<sup>6</sup>+70<sup>2</sup>+78<sup>2</sup>

+87

5 +94<sup>2</sup>

566.25

6+00<sup>5</sup>+07<sup>5</sup>+15<sup>8</sup>+23<sup>8</sup>+31<sup>2</sup>+39<sup>2</sup>+47<sup>8</sup>+55<sup>2</sup>+63<sup>2</sup>+70<sup>2</sup>+76<sup>2</sup>+82<sup>1</sup>+88<sup>8</sup>6 +99<sup>1</sup>

564.68

563.04





Jan 2 - 1932

63

2 4 6 8 10

5

B.M. 5.91 561.19 555.28

4+80 18.66 16.90 12.08  
577.85 78.09 573.274+398 19.33 17.57 12.75  
580.52 578.76 573.94

B.M. 6.68 561.96 555.28

4+236 18.82 17.06 12.24  
580.78 579.02 74.20+176 18.92 17.16 12.34  
580.88 579.12 74.303+977 19.26 17.50 12.68  
581.22 579.46 74.64

Jan 3 - 1932

B.M. 7.00 562.28 555.28

4+21 19.61 17.85 13.03  
3+562 581.89 580.13 575.31

Jan 3

4+316 .14out .21out .14out .04out .03in

+236 .25out .02out 0.0 .05out .00

&gt; +175 .04in .03in .13out .17out 0.0

+118 .03out .21out .13out .04out .05in

4+058 .108out .27out .17out .02in .07in

3+972 .03out .18out .14out .05out .03in

3+900 .13out .16out .03out .07out .00

+835 .11out .10out .05out .03out .02in

+768 .25out .19out .03in .10in .12in

+694 .22out .14out .04in .06in .11in

+625 .15out .04out .04in .02in .08in

3+562 .12out .06out .01out .04in .10in

B.M.	4.90	562.12		557.22
3+20	+20.39	118.63	13.81	
	582.51	580.75	575.93	

B.M.	5.80	563.02		557.22
2+76E	20.21	18.45	13.63	
	583.23	581.47	576.65	

B.M.	7.22	564.44		557.22
			4.80	559.64
	6.36	666.00		
			2.40%	663.59%
	4.06%	567.66		
			0.86	566.80 566.81

	7.73	564.95		557.22
2+41 <sup>2</sup>			+18.87	583.82
			+17.11	
			+12.29	

Jan 4 - 1933

64

	2	4	6	8	10
3+49 <sup>7</sup>	.10out	.12out	.05out	.07in	.07in
+42 <sup>8</sup>	.07out	.10out	.03out	.00	.06in
+34 <sup>7</sup>	.04in	.04out	.01out	.10out	.00
+27 <sup>9</sup>	.14in	.00	.11out	.08out	.00 ✓
3+20 <sup>9</sup>	.12in	.02in	.10out	0.0	.09in ✓

Jan 6 - 1933

3+12 <sup>8</sup>	.00	.06in	.08in	.02out	.02out ✓
+07 <sup>9</sup>	.03in	.06in	.04in	.06out	.06out ✓
3+00 <sup>6</sup>	.12in	.08in	.02in	.13out	.16out ✓
2+94 <sup>8</sup>	.13in	.10in	.02in	.14out	.17out ✓
+88 <sup>7</sup>	.02out	.08out	.02in	.07in	.03out ✓
+82 <sup>6</sup>	.00	.05in	.07in	.03out	.08out ✓
2+76 <sup>5</sup>	.02in	0.0	.01out	.06in	.02in ✓

Jan 7 - 1933

2+70 <sup>6</sup>	0.01 in	0.01 out	0.0	0.04 in	0.02 in ✓
+64 <sup>6</sup>	0.01 out	0.06 in	.04 out	0.05 out	0.00 ✓
+58 <sup>6</sup>	0.09 in	0.08 in	.02 out	0.02 out	0.03 out ✓
+52 <sup>6</sup>	0.14 in	0.10 in	.04 in	0.01 in	0.02 out ✓
+46 <sup>6</sup>	0.13 in	0.09 in	.10 in	0.16 in	0.06 in ✓
+41 <sup>2</sup>	0.10 in	0.03 in	.09 in	0.10 in	0.00 ✓

Jan. 9, 1933 A.M.

65

B.M.	5.62	565.26	559.64
2+02 <sup>E</sup>		+19.20	19'2 <sup>3</sup> / <sub>8</sub> "
		+17.44	17'5 <sup>1</sup> / <sub>4</sub> "
		+12.62	12'7 <sup>1</sup> / <sub>2</sub> "
			584.46

	2	4	6	8	10
2+35 <sup>8</sup>	.14 in	.02 in	.03 in	.03 in	.01 out ✓
+29 <sup>4</sup>	.01 in	.13 in	.14 in	.01 out	0.00 ✓
+25 <sup>4</sup>	.02 out	.09 in	.13 in	.03 out	.03 in ✓
+19 <sup>4</sup>	0.00	.04 in	.06 in	.01 out	.01 in ✓
+13 <sup>0</sup>	.03 out	.05 in	.15 in	.09 in	.02 out ✓
+08 <sup>8</sup>	.05 out	.12 in	.33 in	.07 in	.07 out ✓
+02 <sup>E</sup>	.11 in	.32 in	.16 in	.12 out	.06 out ✓

Jan. 9, 1933 - P.M.

B.M.	6.54	566.18	559.64
1+69 <sup>4</sup>		+18.84	18'10 <sup>1</sup> / <sub>8</sub> "
		+17.08	17'1"
		+12.26	12'3"
			585.02

	2	4	6	8	10
1+96 <sup>8</sup>	.10 in	.32 in	.25 in	.06 out	.14 out ✓
+90 <sup>7</sup>	.13 in	.21 in	.17 in	.07 out	.17 out ✓
+84 <sup>8</sup>	.22 in	.19 in	.03 in	.14 out	.15 out ✓
+78 <sup>5</sup>	.24 in	.13 in	.05 in	.01 out	.05 out ✓
+75 <sup>8</sup>	.09 in	.17 in	.02 out	.19 out	.11 out ✓
+69 <sup>4</sup>	.04 in	.30 in	.15 in	.09 out	.02 in ✓

Jan. 10, 1933 P.M.

B.M.	7.22	566.86	559.64
1+30 <sup>3</sup>		+18.80	18'9 <sup>5</sup> / <sub>8</sub> "
		+17.04	17'0 <sup>1</sup> / <sub>2</sub> "
		+12.22	12'2 <sup>5</sup> / <sub>8</sub> "
			585.66

	2	4	6	8	10
1+63 <sup>2</sup>	.10 in	.33 in	.15 in	.01 in	.02 out
+58 <sup>7</sup>	.02 out	.19 in	.27 in	.07 in	.09 out
+51 <sup>8</sup>	O.K.	.15 in	.24 in ✓	.07 in	.14 out
+45 <sup>9</sup>	.09 in	.13 in	.07 in	.05 out	.06 out
+39 <sup>9</sup>	.12 in	.45 in	.63 in ✓	.24 in	.05 in
+33 <sup>9</sup>	.06 in	.01 out	.41 in ✓	.01 out	.02 out
+30 <sup>3</sup>	.04 in	.04 out	.04 in	.03 in	.09 in

1889	86.56
<u>658</u>	<u>67.67</u>
1231	18.89
	<u>176</u>
	17.13

B.M. 5.57	567.67		562.10	
0+76 <sup>2</sup>	+18.89 ✓	18'10 <sup>5</sup> / <sub>8</sub> "	586.56	1+12 <sup>2</sup>
	+17.13 ✓	17'1 <sup>5</sup> / <sub>8</sub> "		7+06 <sup>3</sup>
	+12.31 ✓	12'3 <sup>3</sup> / <sub>4</sub> "		14+00 <sup>2</sup>

E.28	566.21		560.93	
1+12 <sup>2</sup>	+19.75	19'9"	585.96	0+94 <sup>0</sup>
	+17.99	18'0"		0+88 <sup>1</sup>
	+13.17	13'2"		0+82 <sup>2</sup>

Sta.	2	4	6	8	10
	.09 out	.15 out	.05 out	.06 out	.05 out ✓
	Grade	.01 out	.02 out	.10 out	.06 out ✓
	Grade	.09 out	.09 out	.08 out	.02 out ✓
	.06 out	.06 out	.03 in	Grade	.01 in ✓
	.03 out	.06 out	.07 out	.09 out	.05 out ✓
	.03 out	.05 out	.02 out	.05 out	.04 out ✓
	.03 out	.04 in	.03 in	Grade	.09 out ✓

B.M. 556 567.65 562.09

0+51<sup>8</sup> +19.31 19'33" 586.96  
 +17.55 17'6<sup>5</sup>/<sub>8</sub>"  
 +12.73 12'8<sup>3</sup>/<sub>4</sub>"

6.18 568.27 562.09

0+58<sup>1</sup> 586.86

0+64 586.76

0+70<sup>2</sup> 586.66

B.M. 5.50 Jan 15 567.60 562.10  
 4 48.8 28.10  
 0+46 +19.46 +17.70 +12.88  
 587.06 585.30 580.48  
 +19.91 +18.15 +13.33  
 0+19 587.51 585.75 580.93

2 4 6 8 10

0+51<sup>8</sup> .00 .04 in .16 in .10 in .03 out  
 0+58<sup>1</sup> .06 out .29 in .28 in .13 in .08 out  
 0+64 .00 .40 in .53 in .32 in Grade  
 0+70<sup>2</sup> .03 in .10 in .10 in .02 out

0+46<sup>0</sup> .02 in .11 in .16 in .04 in .05 out  
 0+43<sup>0</sup> .01 in .18 in .14 in 00 .06 out  
 0+37<sup>0</sup> .08 in .12 in .12 in 00 .10 out  
 0+31<sup>0</sup> .11 in .17 in .10 in .02 in .02 out  
 0+25<sup>0</sup> .17 in .22 in .13 in .09 in .04 in  
 0+19<sup>0</sup> .29 in .28 in .06 in .14 in .10 in

July 5-1933  
B.Ms on 8° offset

1667  
4  
06668

Wd. TK. ind. at 4+20 <sup>59</sup>		555.28	
	3.24 1/2	558.52 1/2	
Set B.M. 4+20 <sup>59</sup> (8° offset)	1.61 1/2	556.91	
Set B.M. 7+00 (8° offset)	6.51	552.01 1/2	
	4.33	556.34 1/2	
Set B.M. 8+17 <sup>15</sup> (8° offset)	6.04 1/2	550.30	
B.M.		552.02	
	4.48	556.50	
7+40	1.64	554.86	549.86
7+77 <sup>5</sup>	2.26	554.24	549.24
8+15	2.88	553.62	548.62
B.M.	5.93	550.91	550.60
B.M.	3.33	553.63	550.30
9+20 <sup>5</sup>	1.73	551.87	546.87
B.M.	3.23	553.53	550.30
9+00	+ 6.18	559.71	559.71
7+04	+ 6.11		559.64



Status of Timber Plumb  
Posts at Spring Line 12/28/32

Sta.	Rt. or North	Sta.	Left or South.
6+99 <sup>2</sup>	0.13 in	6+99 <sup>0</sup>	0.1 K
+88 <sup>8</sup>	out	+93 <sup>5</sup>	concreted
+82 <sup>1</sup>	0.13 in	+88 <sup>0</sup>	0.16 in
+76 <sup>2</sup>	out	+75 <sup>7</sup>	0.20 in
+70 <sup>2</sup>	out	+69 <sup>6</sup>	0.26 in
+63 <sup>2</sup>	out	+61 <sup>2</sup>	0.19 in
+55 <sup>9</sup>	out	+51 <sup>9</sup>	0.08 in
+47 <sup>8</sup>	0.10 in	+42 <sup>2</sup>	0.04 in
+39 <sup>9</sup>	0.06 in	+35 <sup>3</sup>	Forms in Place
+31 <sup>7</sup>	out	+27 <sup>1</sup>	Grade
+23 <sup>8</sup>	0.20 in	+19 <sup>6</sup>	0.04 out
+15 <sup>8</sup>	0.17 in	+10 <sup>7</sup>	0.03 out
+07 <sup>5</sup>	0.16 in	6+04 <sup>7</sup>	0.03 in
6+00 <sup>5</sup>	0.19 in	5+96 <sup>1</sup>	0.14 in
5+94 <sup>7</sup>	0.17 in	+90 <sup>5</sup>	0.14 in
+87 <sup>0</sup>	out	+87 <sup>0</sup>	0.13 in
+78 <sup>2</sup>	0.05 in	+80 <sup>0</sup>	0.10 in
+70 <sup>9</sup>	out	+75 <sup>1</sup>	0.09 in
+62 <sup>6</sup>	out	+69 <sup>2</sup>	0.13 in
+54 <sup>2</sup>	0.03 in	+60 <sup>0</sup>	0.08 in
+46 <sup>1</sup>	out	+53 <sup>9</sup>	out
+39 <sup>1</sup>	out	+45 <sup>8</sup>	0.13 in
		+9	0.03 in
		+3	0.0



13-3.21  
 12-3.21  
 11-3.21  
 10-3.21 3'2 1/2"  
 9-3.18 3'2 1/8"  
 8-3.11 3'1/4"  
 7-3.01 3'00"  
 6-2.86 = 2'10 1/2"  
 5-2.67 2'8"  
 4-2.44 2'5 1/4"  
 3-2.17 2'2"  
 2-1.86 = 1'10 1/2"  
 1-1.50 = 1'6"  
 0-1.09 = 1'1"

B.M. -19.57 568.53 588.10

- 0.53 568.00

0+29.5  
0+37.5

+ 7.97 576.50

3.66 566.47 5.72 562.81

0+87.5

+ 6.53 573.0

0+87.5

3.8 562.7

68 76

72

562.10  
5.55  
567.65

69.37 = 2 67  
+ 10.29  
13.96

14-2

588.10  
19.57  
568.53  
5.72  
562.81  
3.66  
566.47

Ent  
Exit

B.M.

T.P.  
N3464  
N3464

3456

3448

3440

3424

3416

3408

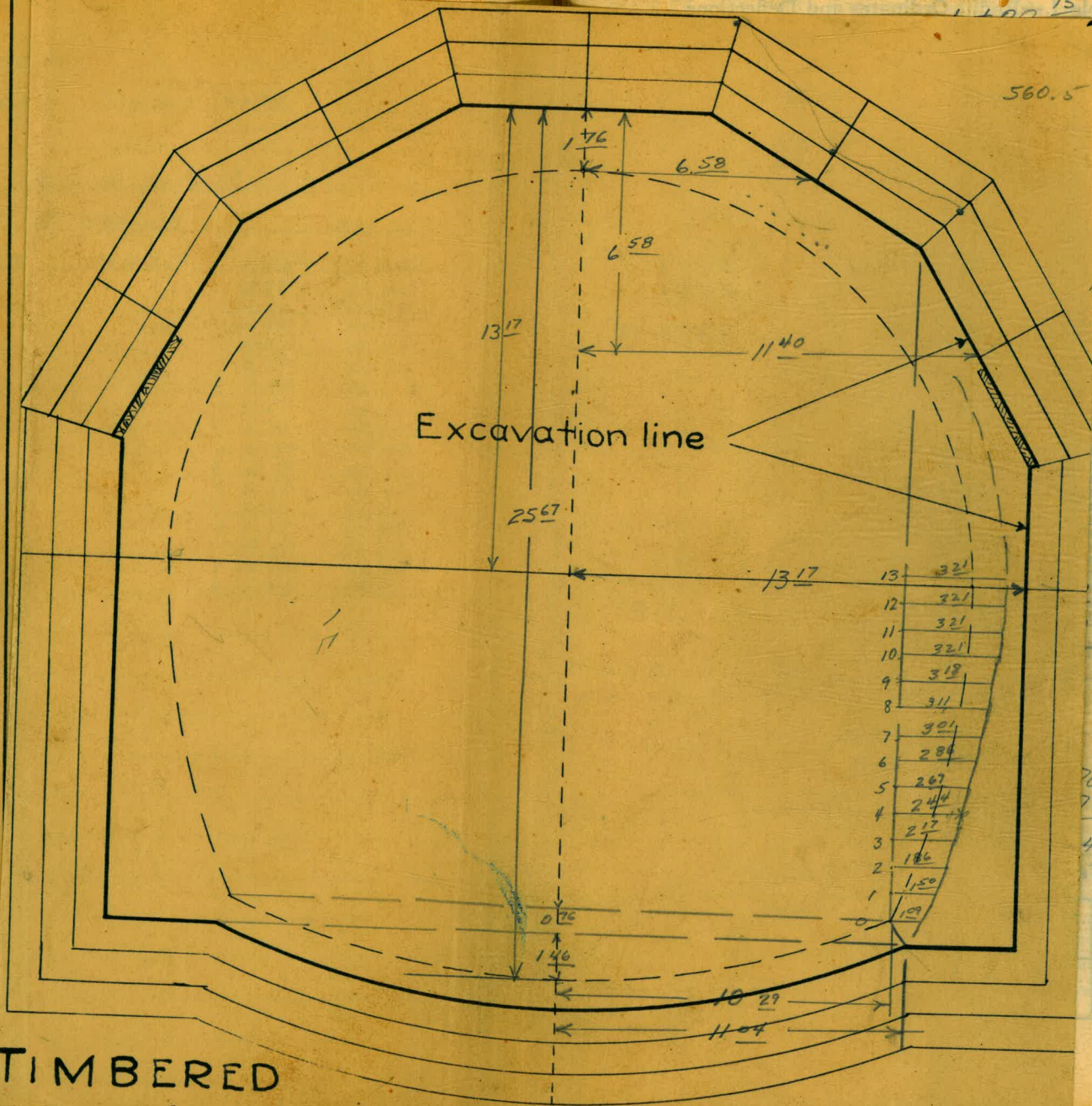
3392

16.12

12.22

13.90

TIMBERED



560.5

8+1793

- 6058

7+57.35

12.75

.067

89.25

76.50

275

12925

77

77

0

78.63

74.40

4.23

Ent  
Exit

11.37  
10.34  
21.71

B.1

562.10  
4.75

8+17 15  
2+40

T. F.  
N346  
N346

566.85  
5.94  
560.91

5+77 15

345

344

566.85

344

56  
24  
32

342

560.93  
5.94

341

566.87  
4.75

8+17 15  
7+20.59  
396.56

340

339

562.12  
10.58

4+20.59  
1 33.35  
287.24

572.70  
1.93  
570.77

16.1

12.3

13.1

13+62 84  
12+12 77  
150.07  
99.08  
50.99

1+00 15  
72 37  
1+72 52

8+17 93  
- 60 58  
7+57.35

1.86  
10.29  
12.15

78 78

12.75

.067  
89.25  
76.50  
12.75  
212925

8+17 15

12+12 77  
2 40.77

9+72 0

.9695 =

76.74 6

38780

67865

58170

67865

74397430

78.63

74.40

4.23

7  
7 Timber 9+74.

Core Wall

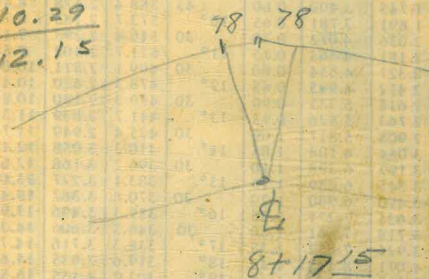
8 533.24 533.06

535.20	1.25	531.99
12.8	13.20	22.00
	11.20	24.00
	11.20	24.00
	5.20	30.00
	- 5.20	30.00
	+ 0.80	36.00
	+ 0.80	36.00
	+ 4.80	40.00
	+ 4.80	40.00
	+ 6.80	42.00
	+ 6.80	42.00
	+ 8.80	44.00
	+ 8.80	44.00
	+ 10.80	46.00
	+ 10.80	46.00
	+ 12.80	48.00

13+62 84  
12+12 77  
150.07  
99.08  
50.99

1+00 15 8+17.93  
72 37 - 60.58  
1+72 52 7+57.35

1.86  
10.29  
12.15



12.75  
.067  
89.25  
76.50  
12.75  
2129.25

12+12 77  
2 40 77

9+72 0

.9695 2  
76.74 0  
38780 12 3  
67865  
58170  
67865  
74397430

78.63  
74.40  
4.23



