

292

W 292

ASTM

Level Book Section

LEVEL BOOK

No. 580F

620-17.5-750-094

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 1965

O.R.-S.D. 2nd. Main Pipe Line.
City Datum.

INDEX.

Final Cross Sections - Trench
Excavation - Schedule I.

Page Description

2-79 Sta. 680+17.5 - Sta. 790+09.4.
Standard 4.50 Trench.

60 (Sta 710+00 to 712+00
740+25 to 742+80
775+50 to 778+00
Additional Ydg. Moved Twice.)

O.R. - 5 D. 2nd. Main Pipe Line.
 Final Cross Sections. - Schedule I.
 Sta. 680+17.5 to Sta. 790+09.4.

Contd. from Book 291. Page

Sta. Grade Elev. Dist. L.C. &
 Standard 4.5 Trench.

680+

+17.5 201.6 207.6

$\frac{7.1}{2.5}$ 6.0

2.5

+20 201.6 207.1

5.5

10.0

+30 201.6 206.4

4.8

8.0

+38 201.6 206.7

5.1

4.

Cold + Stormy.

7/9/30
 Converse - Notes
 Hill - Grades
 Elliott - " "
 Simpson
 Walton

2

Back fill.

Excavation Pipe Contr. Exc. Contr.

R.C. End Area Av. End Area Cu. Yds. Cu. Yds. Cu. Yds.

Chd. T.M.M.

$\frac{5.4}{2.3}$ 27.56 ✓

26.16 ✓ 2.42 ✓

24.75 ✓

23.18 ✓ 8.59 ✓

21.60 ✓

22.28 ✓ 6.60 ✓

22.95 ✓

25.04 ✓ 3.71 ✓
 21.32 ✓

27.11

27.12

Calc. - w. H.S.
 M.R.S.

P.A.C.L.

Calc. - w. H.S.
 M.R.S.

Sta	Grade	Elev.	Dist	L.C.	Ch.	T.C.	END Area	AV. END Area	CU. Yds.	CU. Yds.	CU. Yds.
680+42	201.6	207.6	5	$\frac{6.4}{2.35}$	6.0	5.7 $\frac{2.25}{2.25}$	27.11	31.97	5.92		
+47	201.6	210.0	16	$\frac{9.1}{3.03}$	8.4	$\frac{6.0}{2.25}$	36.82	33.79	20.02		
+63	202.8	209.6	12	$\frac{6.8}{2.45}$	6.8	$\frac{6.8}{2.45}$	30.76	36.24 36.31	16.11 16.14		
+75	203.7	212.4	25	$\frac{9.2}{3.05}$	8.7	$\frac{8.7}{2.93}$	41.72 41.86	36.00 36.07	33.33 33.40		
681	205.5	212.2	25	$\frac{6.7}{2.43}$	6.7	$\frac{6.7}{2.43}$	30.28	28.64	26.52		
						27.00					

Calc. M.R.E.
W. H. S.

Calc. M.R.E.
W. H. S.

Sta	Grade	Elev.	Dist	L.C.	Φ	R.C.	End Area	Av. End Area	Cu Yds.	Cu Yds.	Cu Yds.
681+25	207.4	213.4		6.0 2.25	6.0	6.0 2.25	27.00 ✓				
			25 ✓					26.33 ✓	24.38 ✓		
+50	208.4	214.1			5.7		25.65 ✓				
			50 ✓					22.50 ✓	41.67 ✓		
282 ✓	210.4	214.7			4.3		19.35 ✓				
			10 ✓					23.18 ✓	8.59 ✓		
+10	211.5	217.5			6.0		27.00 ✓				
			15 ✓					33.12 ✓	18.40 ✓		
+25	213.1	221.5		8.4 2.9 2.85	8.4	8.4 2.9 2.85	39.24 ✓				
			25 ✓					37.58 ✓	34.80 ✓		
+50	215.8	223.6		7.8 2.7	7.8	7.8 2.7	35.91 ✓				
			30 ✓					38.15 ✓	42.39 ✓		

Chd. T.M.M.

90.39
Calc. - w.H.S.

P.R.C.

170.23 ✓
Calc. - w.H.S.

Sta	Grade	Elev	Dist	L.C.	L.	R.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
682+80	218.4	227.0		$\frac{8.6}{2.9}$	8.6	$\frac{8.6}{2.9}$	40.39 ✓				
			20.					39.82	29.50 ✓		
683	220.1	228.5		$\frac{8.4}{2.9}$	8.4	$\frac{8.4}{2.9}$	39.24 ✓				
			35.					33.58	43.53 ✓		
+35	223.1	229.3		$\frac{6.2}{2.3}$	6.2	$\frac{6.2}{2.3}$	27.91 ✓				
			19.					29.59	20.82 ✓		
+54 +65	$\frac{224.7}{225.6}$	231.6		$\frac{6.9}{2.8}$	6.9	$\frac{6.9}{2.8}$	31.26 ✓				
			32.4					30.05	36.06 ✓		
+86.4 +95	227.5	233.9		$\frac{6.4}{2.4}$	6.4	$\frac{6.4}{2.4}$	28.84 ✓				
			28.6					27.92	29.57 ✓		
684+15	230.0	236.0			6.0		27.00 ✓				
			35.								
							Chd. T.M.M.	25.88	33.55 ✓		
							W.H.S.	24.75	193.03 ✓		
									Calc. M.M.S.		
									W.H.S.		

Elevation ↑

Sta	Grade	Elev	Dist	L.C.	\$	T.C.	End Area	Av End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
674+50	233.0	238.5			5.5		24.75				
			50.				24.75	45.83			
685	237.0	242.5			5.5		24.75				
			50.				24.98	46.26			
+50	241.0	246.6			5.6		25.20				
			50.				25.20	46.67			
686	245.0	250.6			5.6		25.20				
			50.				25.20	46.67			
+50	248.75	254.3			5.6		25.20				
			50.				24.08	44.59			
687	252.5	257.6			5.1		22.95				
			50.				23.85	44.17			
							29.75	274.19			
								Calc. - w. H.S.			
								VA. CL			
								mi. 0.8			

Sta	Grade	Elev.	Dist	Lt	C.C
687+50	256.2	261.7			5.5
			25.		
+75	258.1	263.7			5.6
			25.		
688	260.0	265.3			5.3
			10.		
+10	260.2	266.2			6.0
			40.		
+50	261.0	268.5		7.5 <u>2.6</u> 2.63	7.5
			25.		
+75	261.5	269.3		7.8 <u>2.7</u>	7.8
			25.		

P.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
	24.75				
		24.98	23.13		
		25.20			
		24.53	22.71		
		23.85			
		25.43	9.42		
		27.00			
		30.66	45.42		
		34.32			
		35.12	32.52		
		35.91			
		34.60	32.04		
			165.24		
			W.H.S.		
			33.28		
			P.R.L.L.		
			Calc. M.C.B.		

Sta	Grade	Elev.	Dist	L.C.	d	R.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
689	262.0	269.3	30.	$\frac{7.3}{2.8}$ 2.58	7.3	$\frac{7.3}{2.8}$ 2.58	33.28 ✓	36.84 ✓	40.93 ✓		
+30	260.9	269.5	25.	$\frac{8.6}{2.9}$	8.6	$\frac{8.6}{2.9}$	40.39 ✓	41.57 ✓	38.49 ✓		
+55	260.0	269.0	20.	$\frac{9.0}{3.0}$	9.0	$\frac{9.0}{3.0}$	42.75 ✓	42.16 ✓	31.23 ✓		
+75	259.3	268.1	10.	$\frac{8.8}{3.0}$ 2.95	8.8	$\frac{8.8}{3.0}$ 2.95	41.56 ✓	44.00 ✓	16.30 ✓		
+85	259.0	268.6	20.	$\frac{9.6}{3.1}$ 3.15	9.6	$\frac{9.6}{3.1}$ 3.15	46.49 ✓	44.60 ✓	33.04 ✓		
690+05	258.2	267.2	10.	$\frac{9.0}{3.0}$	9.0	$\frac{9.0}{3.0}$	42.75 ✓	41.87 ✓	15.51 ✓		
							Calc. w. H.S. 40.97		175.50 ✓ Calc. - w. H.S. M.O.E		

Sta	Grade	Elev	Dist	L.C.	$\frac{L}{2}$	P.C.	End Area	Av End Area	Cu. Yds	Cu. Yds.	Cu. Yds
692+50	250.2	256.2	10.	$\frac{6.0}{2.3}$ 2.25	6.0	$\frac{6.0}{2.25}$ 2.25	27.00	28.88	10.70		
+60	251.8	258.8	20.	$\frac{7.0}{2.50}$	7.0	$\frac{6.2}{2.3}$ 2.30	30.75	29.62	21.94		
+80	254.9	261.2	20.	$\frac{6.7}{2.9}$ 2.43	6.3	$\frac{6.0}{2.8}$ 2.25	28.49	27.76	20.56		
693	258.0	264.0	20.	$\frac{6.0}{2.3}$ 2.25	6.0	$\frac{6.0}{2.8}$ 2.25	27.00	27.46	20.34		
+20	260.2	266.4	30.	$\frac{6.2}{2.3}$	6.2	$\frac{6.2}{2.3}$ 2.30	27.91	27.91	31.01		
+50	263.5	269.7	35.	$\frac{6.2}{2.3}$	6.2	$\frac{6.2}{2.3}$ 2.30	27.91	27.46	35.60		

Chd. M.M.
 27.00
 Y.A.C. Calc. M.M.P. w. H.S.

Sta	Grade	Elev.	Dist	L.C.	¢	P.C.	End Area	Ave. End	Cu. Yds	Cu. Yds	Cu. Yds
698+50	316.6	322.1			5.5		29.75				
			50.					24.75	45.83		
699	321.2	326.7			5.5		29.75				
			50.					25.88	47.93		
+50	322.7	328.7		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00				
			20.					28.64	21.21		
+70	323.9	329.9		$\frac{6.7}{2.43}$	6.7	$\frac{6.7}{2.43}$	30.28				
			20.					28.64	21.21		
+90	323.8	329.8		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00				
			10.					25.88	9.59		
700	324.1	329.6			5.5		29.75				
			50.					24.30	45.00		
							23.85	190.77			
									Calc. AM. H. E.		
									V.A.C.L.		
									W.D.S.		

Sta	Grade	Elev.	Dist	L.C.	Q	T.C.	End Area	Av. End Area	Cu. Yds	Cu. Yds.	Cu. Yds
700+50	324.4	329.7			5.3		23.85				
			50.				24.08		44.59		
701	324.7	330.1			5.4		24.30				
			50.				24.75		45.83		
+50	325.0	330.6			5.6		25.20				
			50.				24.98		46.26		
702	325.3	330.8			5.5		24.75				
			15.				25.88		14.38		
+15	325.4	331.4		$\frac{6.0}{2.3}$	6.0	$\frac{6.0}{2.3}$	27.00				
			35.				27.92		36.19		
+50	325.6	332.0		$\frac{6.4}{2.4}$	6.4	$\frac{6.4}{2.4}$	28.84				
			50.				32.11		59.46		
						Chk. P.M.M.	35.38		246.71		
						Calc. w. H.S.					
						M.R.E.					

Sta	Grade	Elev.	Dist	U.C.	U.	P.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
703	326.0	333.7		$\frac{7.7}{2.78}$ 2.68	7.7	$\frac{7.7}{2.78}$ 2.68	35.38				
			15.					36.47	20.26		
+15	326.1	334.2		$\frac{8.1}{2.78}$ 2.78	8.1	$\frac{8.1}{2.78}$ 2.78	37.56				
			35.					41.70	54.06		
+50	326.3	335.8		$\frac{9.5}{3.13}$ 3.13	9.5	$\frac{9.5}{3.13}$ 3.13	45.88				
			15.					41.70	23.17		
+65	326.4	334.5		$\frac{8.1}{2.78}$ 2.78	8.1	$\frac{8.1}{2.78}$ 2.78	37.56				
			60.					32.28	71.73		
704 +25	326.8	332.8			6.0		27.00				
			25.					25.88	23.96		
+50	327.0	332.5			5.5		24.75				
			20.								
							Chd. T.M.M.	24.30	18.00		
							23.85	211.18			
								Calc. M.M.E			
								-- W.H.S.			

Pavement

Sta	Grade	Elev.	Dist	L.C.	$\frac{L}{2}$	R.C.	End Area	Ave. End.	Cu. Yds.	Cu. Yds.	Cu. Yds.
704+70	328.5	333.8			5.3		23.85 ✓				
			5. ✓					28.82 ✓	15.34 ✓		
+75	328.9	336.3		$\frac{7.4}{2.6}$ ✓	7.4	$\frac{7.4}{2.6}$ ✓	33.79 ✓				
			25. ✓					31.08 ✓	28.78 ✓		
705	330.8	337.1		$\frac{6.3}{2.33}$ ✓	6.3	$\frac{6.3}{2.33}$ ✓	28.27 ✓				
			10. ✓					27.69 ✓	10.26 ✓		
+10	331.6	337.6			6.0		27.00 ✓				
			40. ✓					25.88 ✓	38.34 ✓		
+50	334.7	340.2			5.5		24.75 ✓				
			25. ✓					24.30 ✓	22.50 ✓		
+75	336.8	342.1			5.3		23.85 ✓				
			15. ✓					25.43 ✓	14.13 ✓		
									119.35 ✓		
									Calc. w. H.S.		
									M.D.B.		
							Chd. F.M.M.				
							27.00 ✓				

Sta.	Grade	Elev.	Dist	Lc.	F	RC.	END Area	AV. END Area	Cu. Yds	Cu. Yds	Cu. Yds
711 + 52.95	367.4	373.4		$\frac{3.8}{2.25}$	6.0	$\frac{7.3}{2.58}$	25.99 ✓				
			29.97 ✓					33.83 ✓	37.55 ✓		
+ 82.92	366.15	372.5		$\frac{6.5}{2.38}$	9.3	$\frac{10.2}{3.30}$	41.66 ✓				
			29.78 ✓					36.71 ✓	40.49 ✓		
712 + 12.7	362.5	369.5		$\frac{6.0}{2.25}$	7.0	$\frac{8.0}{2.75}$	31.75 ✓				
			15.3 ✓					33.37 ✓	18.91 ✓		
+ 28	359.3	366.9		$\frac{7.0}{2.50}$	7.6	$\frac{8.3}{2.80}$	34.98 ✓				
			14.1 ✓					31.22 ✓	16.30 ✓		
+ 42.1	356.4	362.4		$\frac{5.7}{2.25}$	6.0	$\frac{6.7}{2.03}$	27.45 ✓				
			28.8 ✓					27.23 ✓	29.05 ✓		
+ 70.9	347.95	354.0		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00 ✓				
			29.1 ✓					27.00 ✓	29.10 ✓		
							Ch. T.M.M.	27.00 ✓	171.40 ✓		
							Y.A.L.L.		Calc. M. 108.		
							27.00		✓ - w.H.S.		

Sta.	Grade	Elev.	Dist.	L.C.	£	R.C.	END AREA	AV. END AREA	CU. Yds	CR. Yds.	CU. Yds
713+00	338.1	349.1		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00 ✓				
			20. ✓					28.88 ✓	21.39 ✓		
+20	331.4	338.2		$\frac{6.8}{2.45}$	6.8 ✓	$\frac{6.8}{2.45}$	30.76 ✓				
			2. ✓					28.88 ✓	2.14 ✓		
+22	330.7	336.7		$\frac{6.0}{2.25}$	6.0 ✓	$\frac{6.0}{2.25}$	27.00 ✓				
			8. ✓					24.75 ✓	7.33 ✓		
+30	328.0	333.0			5.0 ✓		22.50 ✓				
			20. ✓					24.75 ✓	18.33 ✓		
+50	321.2	327.2		$\frac{6.0}{2.25}$	6.0 ✓	$\frac{6.0}{2.25}$	27.00 ✓				
			15. ✓					30.40 ✓	16.89 ✓		
+65	316.2	323.6		$\frac{7.4}{2.60}$	7.4 ✓	$\frac{7.4}{2.60}$	33.79 ✓				
			20. ✓								
							Chd. FM. 7.1	30.40	22.52 ✓		
							Y.A.L.		88.60 ✓		
							27.00		calc. w. H.S. M.D. 5		

Sta.	Grade	Elev.	Dist	L.C.	±	R.C.	END Area	AV. END Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
713+85	309.4	315.4		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00 ✓				
			15. ✓					26.10 ✓	14.50 ✓		
714	304.4	310.0			5.6		25.20 ✓				
			40. ✓					23.85 ✓	35.33 ✓		
+40	290.9	295.9			5.0		22.50 ✓				
			15. ✓					22.73 ✓	12.63 ✓		
+55	285.8	290.9			5.1		22.95 ✓				
			45. ✓					24.98 ✓	41.63 ✓		
715	270.6	276.6		$\frac{6.0}{2.3}$	6.0	$\frac{6.0}{2.3}$	27.00 ✓				
			14.5. ✓					29.13 ✓	15.64 ✓		
+145	265.7	272.6		$\frac{6.9}{2.48}$	6.9	$\frac{6.9}{2.48}$	31.26 ✓				
			19.4. ✓					31.26 ✓	16.67 ✓		
							Chd. T.M.M.	31.26 ✓	136.40 ✓		
								V.A.L.L.	Calc. M.A.S.		
									✓ - W.H.S.		

Sta.	Grade	Elev.	Dist.	L.C.	¢	R.C.	END Area	Av. END Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
716+39.9	256.0	257.8	15.0		1.8		8.10 ✓				
								9 ✓	17.55 ✓	9.75 ✓	
+54.9	256.6	262.6	14.9	$\frac{6.0}{2.3}$	6.0	$\frac{6.0}{2.3}$	27.00 ✓				
								9 ✓	32.14 ✓	17.74 ✓	
+69.8	258.4	266.4	14.7	$\frac{8.9}{2.98}$	8.0	$\frac{8.9}{2.98}$	37.28 ✓				
								9 ✓	32.14 ✓	17.50 ✓	
+84.5	261.3	267.3	15.9	$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00 ✓				
								9 ✓	31.19 ✓	18.37 ✓	
717+00.4	265.1	272.8	3.6	$\frac{7.7}{2.68}$	7.7	$\frac{7.7}{2.68}$	35.38 ✓				
								9 ✓	37.89 ✓	5.05 ✓	
+04	265.8	274.4	16.6	$\frac{8.6}{2.9}$	8.6	$\frac{8.6}{2.9}$	40.39 ✓				
								9 ✓	33.70 ✓	20.72 ✓	
								9 ✓	27.00 ✓	89.13 ✓	
											Calc. MRS ✓ W.H.S. ✓

Road ↑

Sta.	Grade	Elev.	Dist.	L.C.	$\frac{1}{2}$	R.C.	END Area	AV. END Area	Cu.	Cu. Vols.
717+20.6	268.9	274.9		$\frac{6.0}{2.75}$	6.0	$\frac{6.0}{2.25}$	27.00 ✓			
			2.4 ✓					25.65 ✓	2.28 ✓	
+23	269.4	274.8					29.30 ✓			
			6.9 ✓					27.53 ✓	7.04 ✓	
+29.9	270.7	277.5		$\frac{6.8}{2.45}$	6.8	$\frac{6.8}{2.45}$	30.76 ✓			
			20.1 ✓					33.62 ✓	25.03 ✓	
+50	273.4	281.3		$\frac{7.9}{2.73}$	7.9	$\frac{7.9}{2.73}$	36.47 ✓			
			35.2 ✓					39.92 ✓	52.04 ✓	
+85.2	278.2	287.3		$\frac{9.1}{3.03}$	9.1	$\frac{9.1}{3.03}$	43.37 ✓			
			14.8 ✓					48.54 ✓	26.61 ✓	
718	279.7	290.4		$\frac{10.7}{3.43}$	10.7	$\frac{10.7}{3.43}$	53.70 ✓			
			15.1 ✓					52.00 ✓	29.08 ✓	
									142.08 ✓	
										calc. w H.S. M.R.E.
										50.31

Road

Road

Chd. T.M.M.

P.R.C.L.

calc. w H.S.
M.R.E.

Sta.	Grade	Elev.	Dist.	L.C.	¢	P.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.
718+15.1	281.2	291.4		$\frac{10.2}{3.30}$	10.2	$\frac{10.2}{3.30}$	50.31			
			Road 2.9					49.01	5.26	
+18	281.3	291.1	↓	$\frac{9.8}{3.20}$	9.8	$\frac{9.8}{3.20}$	47.71			
			2.0					56.11	4.16	
+20	281.4	293.6		$\frac{12.2}{3.80}$	12.2	$\frac{12.2}{3.80}$	64.51			
			25.0					84.17	77.94	
+45	282.2	298.9		$\frac{16.7}{4.93}$	16.7	$\frac{16.7}{4.93}$	103.83			
			14.3					86.50	45.81	
+59.3	289.2	302.0		$\frac{12.8}{3.95}$	12.8	$\frac{12.8}{3.95}$	69.16			
			27.5					54.20	55.20	
+86.8	301.2	309.6		$\frac{8.4}{2.85}$	8.4	$\frac{8.4}{2.85}$	39.24			
			28.4					34.52	36.31	
							Ch. T.M.M.	29.79	224.68	
							Calc. M.R.B.			
							v-w.H.S.			

Sta.	Grade	Elev.	Dist.	L.C.	$\frac{L}{2}$	P.C.	End Area	AV. END AREA	Cu. Yds.	Cu. Yds.
719+15.2	310.75	317.4		$\frac{6.6}{2.4}$	6.6	$\frac{6.6}{2.4}$	29.79 ✓			
			29.2 ✓				29.32 ✓		31.71 ✓	
+444	317.9	324.3		$\frac{6.4}{2.4}$	6.4	$\frac{6.4}{2.4}$	28.84 ✓			
			15.6 ✓				30.55 ✓		17.65 ✓	
+60	321.0	328.1		$\frac{7.1}{2.53}$	7.1	$\frac{7.1}{2.53}$	32.26 ✓			
			5.0 ✓				29.63 ✓		5.49 ✓	
+65	322.0	328.0		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00 ✓			
			10. ✓				25.88 ✓		9.59 ✓	
+75	324.0	329.5			5.5 ✓		24.75 ✓			
			25. ✓				24.53 ✓		22.71 ✓	
720	327.2	332.6			5.4 ✓		24.30 ✓			
			50. ✓				23.63 ✓		43.76 ✓	
							22.95 ✓		30.91 ✓	
									calc. w/ H.S.	
									M.R.E.	

Chd. M.M.M.

P.A.C.L.

calc. w/ H.S.
M.R.E.

Sta.	Grade	Elev.	Dist.	L.C.	\bar{E}	P.C.	End Area.	Av. End Area.	Cu. Yds.	Cu. Yds.
722	+55	357.0	365.3	$\frac{8.3}{2.83}$	8.3	$\frac{8.3}{2.83}$	38.68 ✓			
			6.5 ✓				42.89 ✓	10.33 ✓		
+615	357.4	367.1		$\frac{9.7}{3.18}$	9.7	$\frac{9.7}{3.18}$	47.09 ✓	56		
			2.5 ✓				50.04 ✓	4.63 ✓		
+64	357.4	368.0		$\frac{10.6}{3.40}$	10.6	$\frac{10.6}{3.40}$	52.99 ✓			
			15. ✓				52.66 ✓	29.26 ✓		
+74	357.4	367.9		$\frac{10.5}{3.38}$	10.5	$\frac{10.5}{3.38}$	52.33 ✓			
			6. ✓				56.72 ✓	12.60 ✓		
+85	357.4	368.8		$\frac{10.8}{3.45}$	11.4	$\frac{13.4}{4.10}$	61.10 ✓			
			29.9 ✓				61.65 ✓	68.27 ✓		
723+14.9	359.35	370.8		$\frac{10.8}{3.45}$	11.4	$\frac{14.0}{4.25}$	62.19 ✓			
			30.1 ✓				59.78 ✓	61.07 ✓		
							47.37	186.16 ✓		
								calc. - W.H.S.		
								M.D.C.		

Chd. T.M.M.

V.A.L.

calc. - W.H.S.

M.D.C.

Sta	Grade	Elev.	Dist.	L.C.	ϕ	R.C.	End Area	Av. End Area	Cu. Yds	Cu. Yds.
7 723+45	362.3	372.8	15.1	$\frac{8.5}{2.88}$	9.5	$\frac{11.5}{3.63}$	47.37 ✓	V.A.C.L.	41.76 ✓	23.35 ✓
+60.1	365.35	372.8	29.9	$\frac{6.9}{2.48}$	7.5	$\frac{9.5}{3.13}$	36.15 ✓		31.23 ✓	34.58 ✓
+90	367.25	373.0	20.	$\frac{4.7}{2.25}$	5.8	$\frac{7.1}{2.53}$	26.30 ✓		27.29 ✓	20.18 ✓
724+10	367.2	373.4	15.	$\frac{5.0}{2.25}$	6.2	$\frac{7.6}{2.65}$	28.17 ✓		27.10 ✓	15.06 ✓
+25	367.1	373.4	10.	$\frac{3.3}{2.25}$	6.3	$\frac{7.2}{2.55}$	26.03 ✓		29.02 ✓	10.75 ✓
7 +35	367.1	374.2	6.	$\frac{6.0}{2.25}$	7.1	$\frac{8.0}{2.75}$	32.00 ✓		30.18 ✓	6.71 ✓
										110.63 ✓
										Calc. M.R.B. - W.H.S.

Chd. P.M.M.

Clear + Warm Jan. 16. 1930.
 Converse - Notes
 Hill - Grades
 Elliott - *
 Simpson
 Walton

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Sta.	Grade	Elev	Dist.	L.C.	±	R.C.	End Area	Av. End Area	cu. Yds	cu. Yds.	Cu. Yds
+41	367.0 ✓	373.0	9. ✓	$\frac{6.0}{2.25}$	6.0 ✓	$\frac{7.2}{2.55}$	28.35 ✓	18.61 ✓	26.63 ✓	8.88 ✓	
+50	367.0 ✓	372.4	25. ✓	$\frac{4.4}{2.25}$	5.4 ✓	$\frac{7.0}{2.50}$	24.90 ✓	25.82 ✓	23.91 ✓		
+75	367.0 ✓	372.8	25. ✓	$\frac{4.8}{2.25}$	5.8 ✓	$\frac{7.4}{2.60}$	26.74 ✓	25.76 ✓	23.85 ✓		
725	366.9 ✓	372.2	50. ✓	$\frac{4.6}{2.25}$	5.3 ✓	$\frac{6.9}{2.48}$	24.78 ✓	26.29 ✓	48.69 ✓		
+50	366.7 ✓	372.7	50. ✓	$\frac{5.2}{2.25}$	6.0 ✓	$\frac{7.5}{2.63}$	27.79 ✓	26.19 ✓	48.50 ✓		
726	366.5 ✓	371.8	40. ✓	$\frac{4.7}{2.25}$	5.3 ✓	$\frac{6.6}{2.40}$	24.59 ✓	25.50 ✓	31.78 ✓	191.61 ✓	
							26.90		calc. - w.H.S.	M.A.E	

Sta.	Grade	Elev.	Dist.	L.C.	¢	R.C.	End Area	Av. End Area	Cu. Yds	Cu. Yds	Cu. Yds
726+40	366.4	372.1	25.	$\frac{5.1}{2.5}$ 2.25	5.7	$\frac{7.0}{2.5}$	26.40 ✓	17.66 ✓	24.85 ✓	23.01 ✓	
+65	366.3	371.4	30.	$\frac{4.7}{2.5}$ 2.25	5.1	$\frac{5.8}{2.5}$	23.29 ✓		23.01 ✓	25.57 ✓	
+95	366.2	371.2	55.	$\frac{4.5}{2.5}$ 2.25	5.0	$\frac{5.7}{2.5}$	22.73 ✓		22.67 ✓	46.18 ✓	
727+50	366.0	371.0	50.	$\frac{4.2}{2.5}$ 2.25	5.0	$\frac{5.9}{2.5}$	22.61 ✓		23.18 ✓	42.93 ✓	
728	364.0	369.2	50.	$\frac{4.7}{2.5}$ 2.25	5.2	$\frac{6.0}{2.5}$	23.74 ✓		23.56 ✓	43.63 ✓	
+50	362.0	367.0	25.	$\frac{4.6}{2.5}$ 2.25	5.0	$\frac{6.2}{2.5}$	23.38 ✓		22.60 ✓	20.93 ✓	
							Chd. T.M. M.		20.93	20.25 ✓	
							21.82		Calc M. N. B.		
									✓ - W. H. S.		

Sta.	Grade	Elev.	Dist.	L.C.	¢	R.C.	End Area	Av. End Area	cu. Yds	Cr. Yds.	cu. Yds
728+75	361.8	366.6	25.	$\frac{4.2}{2.25}$	4.8	$\frac{5.6}{2.25}$	21.82 ✓	19.61 ✓	21.91 ✓	20.29 ✓	
729	361.6	366.2	25.	$\frac{4.0}{2.25}$	4.6	$\frac{6.4}{2.25}$	21.99 ✓	20.95 ✓	19.40 ✓		
+25	361.4	365.6	25.	$\frac{4.1}{2.25}$	4.2	$\frac{5.2}{2.25}$	19.91 ✓	20.48 ✓	18.96 ✓		
+50	361.2	365.7	25.	$\frac{4.3}{2.25}$	4.5	$\frac{5.4}{2.25}$	21.04 ✓	21.87 ✓	20.25 ✓		
+75	360.9	365.7	25.	$\frac{4.4}{2.25}$	4.8	$\frac{6.2}{2.30}$	22.69 ✓	24.61 ✓	22.79 ✓		
730	360.7	366.5	30.	$\frac{4.7}{2.25}$	5.8	$\frac{7.3}{2.58}$	26.52 ✓	26.75 ✓	29.72 ✓	131.41 ✓	calc. - w. I.S. M.R.G.
							Chd. T.M.M.	26.97			

Sta.	Grade	Elev.	Dist.	L.C.	Φ	R.C.	End Area	Av. End Area	cu. Yds.	cu. Yds.	cu. Yds.
730+30	360.4	366.2	20.	$\frac{5.0}{2.8}$ 2.25	5.8	$\frac{7.4}{2.6}$	26.97 ✓	V.A.L.L. ✓	✓	27.33	20.24
+50	360.2	366.2	25.	$\frac{5.6}{2.8}$ 2.25	6.0	$\frac{7.0}{2.50}$	27.68 ✓	✓	✓	27.45	25.42
+75	359.9	365.9	25.	$\frac{5.0}{2.8}$ 2.25	6.0	$\frac{7.2}{2.6}$ 2.55	27.22 ✓	✓	✓	25.19	23.32
731	359.6	364.5	50.	$\frac{4.6}{2.8}$ 2.25	4.9	$\frac{6.2}{2.30}$	23.15 ✓	✓	✓	24.05	44.54
+50	359.1	364.5	50.	$\frac{5.0}{2.8}$ 2.25	5.4	$\frac{6.4}{2.4}$ 2.35	24.95 ✓	✓	✓	25.58	47.37
732	358.5	364.4	60.	$\frac{5.3}{2.8}$ 2.25	5.9	$\frac{6.2}{2.30}$	26.21 ✓	✓	✓	26.72	59.38
							Chd. T.M.M.			220.27 ✓	Calc. M.R.S. W.H.S.
							27.22				

Sta	Grade	Elev	Dist.	L.C.	$\frac{L}{2}$	R.C.	End Area	Av. End Area	Cu Yds	Cu Yds.	Cu Yds
732+60	357.9	363.9		$\frac{5.7}{\frac{3.3}{2.25}}$	6.0	$\frac{6.5}{\frac{2.4}{2.38}}$	27.22 ✓	V.A.L.L.	0		
			30.						32.32 ✓	35.91 ✓	
+90	355.6	363.5		$\frac{7.7}{\frac{3.7}{2.68}}$	7.9	$\frac{8.8}{\frac{3.8}{2.95}}$	37.41 ✓		0		
			35.						53.77 ✓	69.70 ✓	
733+25	350.4	363.0		$\frac{12.1}{\frac{3.8}{3.78}}$	12.6	$\frac{14.4}{\frac{4.4}{4.35}}$	70.13 ✓		0		
			25.						77.38 ✓	71.65 ✓	
+50	348.3	362.8		$\frac{14.7}{4.30}$	14.5	$\frac{15.4}{4.60}$	84.63 ✓		0		
			25.						88.93 ✓	82.34 ✓	
+75	346.1	361.5		$\frac{15.0}{4.50}$	15.4	$\frac{16.6}{4.90}$	93.23 ✓		0		
			25.						94.29 ✓	87.31 ✓	
734	344.0	359.7		$\frac{15.4}{4.60}$	15.7	$\frac{16.5}{\frac{4.9}{4.86}}$	95.34 ✓		0		
			25.						93.37 ✓	$\frac{86.45}{433.36}$ ✓	
							Calc. T.M.M.				
							91.39			Calc. - w. H.S.	
										M.D.E.	

Sta.	Grade	Elev.	Dist	L.C.	¢	P.C.	End Area	Av. End Area	Cu. Yds	Cu. Yds.	Cu Yds
735+65	328.0 ✓	332.6			4.6 ✓		20.70 ✓	✓ A.C.L.			
			35.					20.48 ✓	26.55 ✓		
736	326.9 ✓	331.4			4.5 ✓		20.25 ✓				
			30.					20.98 ✓	23.31 ✓		
+30	326.0 ✓	330.7		$\frac{4.5}{2.5}$ 2.25 ✓	4.7 ✓	$\frac{5.4}{2.5}$ 2.25 ✓	21.71 ✓				
			20.					24.92 ✓	18.46 ✓		
+50	325.4 ✓	331.4		$\frac{5.5}{2.5}$ 2.25 ✓	6.0 ✓	$\frac{7.5}{2.5}$ 2.63 ✓	28.12 ✓				
			10.					29.22 ✓	10.82 ✓		
+60	325.1 ✓	331.8		$\frac{5.6}{2.5}$ 2.25 ✓	6.7 ✓	$\frac{7.8}{2.70}$ 2.70 ✓	30.31 ✓				
			25.					28.66 ✓	26.54 ✓		
+85	324.4 ✓	330.4		$\frac{5.3}{2.5}$ 2.25 ✓	6.0 ✓	$\frac{6.7}{2.43}$ 2.43 ✓	27.00 ✓				
			15.					24.36 ✓	13.53 ✓		
							Calc. T.M.M. 21.71		119.21 ✓		
									Calc. - w.H.S. M.R. 8		

Sta.	Grade	Elev.	Dist.	L.C.	$\frac{1}{2}$	R.C.	End Area	Av. End Area	Cu. Yds	Cu. Yds	Cu. Yds
737	324.5	329.3		$\frac{4.6}{2.25}$	4.8	$\frac{5.1}{2.25}$	21.71 ✓	V.A.L.L.			
			15.						22.78 ✓	12.66 ✓	
+15	324.7	330.0		$\frac{5.3}{2.25}$	5.3	$\frac{5.3}{2.25}$	23.85 ✓				
			35.						25.24 ✓	32.72 ✓	
+50	326.6	332.4		$\frac{4.6}{2.25}$	5.8	$\frac{7.5}{2.63}$	26.63 ✓				
			20.						26.24 ✓	19.44 ✓	
+70	327.7	333.4		$\frac{4.8}{2.25}$	5.7	$\frac{6.8}{2.45}$	25.84 ✓				
			30.						25.45 ✓	28.28 ✓	
738	329.4	334.9		$\frac{4.9}{2.25}$	5.5	$\frac{6.4}{2.35}$	25.06 ✓				
			50.						25.02 ✓	46.33 ✓	
+50	335.3	340.9		$\frac{5.0}{2.25}$	5.6	$\frac{6.0}{2.25}$	24.98 ✓				
			35.						26.56 ✓		
							Chd. T.M.M. 28.13				
									$\frac{34.43}{173.86}$ ✓		
											Subtotal 6305.23
											Calc M.R.P. ✓. W. H. S.

Sta.	Grade	Elev.	Dist.	L.C.	±	P.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
738+85	339.4	345.4	8.0	$\frac{5.8}{2.3}$ 2.25	6.0	$\frac{7.7}{2.6}$ 2.55	28.13	V.A.L.L.	30.01	8.89	
+93	340.4	347.4	7.0	$\frac{6.6}{2.40}$	7.0	$\frac{7.5}{2.63}$	31.88		31.57	8.18	
739	341.2	347.9	30.0	$\frac{6.7}{2.43}$	6.7	$\frac{7.5}{2.63}$	31.25		29.63	32.92	
+30	346.5	352.5	20.0	$\frac{6.0}{2.3}$ 2.25	6.0	$\frac{6.9}{2.5}$ 2.48	28.01		27.27	20.20	
+50	350.1	355.8	40.0	$\frac{5.3}{2.5}$ 2.25	5.7	$\frac{6.9}{2.5}$ 2.48	26.52		26.93	39.90	
+90	357.2	363.2	10.0	$\frac{5.6}{2.5}$ 2.25	6.0	$\frac{6.7}{2.4}$ 2.43	17.34		36.89	13.66	
									123.75		

Chd. T.M. M.
46 + 4

Calc. + Checked 1/27/30
Elliott + Simpson

Feb. 21. 1930
 Cloudy + Cool.
 Converse - Notes
 Hill - Grades
 Elliott - K
 Simpson - Rod.

Sta.	Grade	Elev.	Dist.	L.C.	ℓ	R.C.	End Area	Av. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
740	359.0	368.6		$\frac{9.6}{2.15}$	9.6	$\frac{9.6}{3.75}$	46.44 ✓	V.A.L.			
			7.0					51.10 ✓	13.25 ✓		
+07	359.9	370.9		$\frac{11.0}{3.50}$	11.0	$\frac{11.0}{3.50}$	55.75 ✓				
			24.0					44.77 ✓	39.80 ✓		
+31	363.2	370.6		$\frac{7.4}{2.60}$	7.4	$\frac{7.4}{2.60}$	33.79 ✓				
			19.0					31.55 ✓	22.20 ✓		
+50	364.5	371.0		$\frac{6.5}{2.38}$	6.5	$\frac{6.5}{2.38}$	29.31 ✓				
			11.0					28.61 ✓	11.66 ✓		
G.B. +61.0	365.2	371.2		$\frac{5.4}{2.35}$	6.0	$\frac{7.4}{2.68}$	27.90 ✓				
			29.0					32.31 ✓	34.70 ✓		
+90	365.2	379.0		$\frac{7.4}{2.60}$	7.8	$\frac{8.8}{2.95}$	36.72 ✓				
			10.0					39.64 ✓	14.68 ✓		
								136.29 ✓			

✓ M.R.E.

Calc - w.H.S. ✓ w.H.S.

✓ w.H.S.

Chd. T.M.M.

Calc - w.H.S. Calc - w.H.S.
 Chd - B.F.M. Chd - B.F.M.

Sta.	Grade	Elev.	Dist.	L.C.	\bar{x}	R.C.	End Area	AV. End Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
741	365.2	373.3		$\frac{7.4}{2.6}$	8.1	$\frac{12.4}{3.85}$	42.56	1/9 C.L.			
			35.0						49.42	64.06	
+35	365.2	376.2		$\frac{9.3}{3.08}$	11.0	$\frac{13.0}{4.0}$	56.28				
			15.0						55.68	30.93	
+50	365.2	375.9		$\frac{9.2}{3.05}$	10.7	$\frac{13.0}{4.0}$	55.07				
			25.0						48.17	44.60	
+75	365.2	373.8		$\frac{7.4}{2.6}$	8.6	$\frac{10.4}{3.35}$	41.26				
			25.0						38.38	35.54	
742	365.2	372.8		$\frac{6.6}{2.4}$	7.6	$\frac{9.1}{3.03}$	35.50				
			25.0						35.83	33.18	
+75	365.2	372.8		$\frac{6.6}{2.4}$	7.6	$\frac{9.6}{3.15}$	36.16				
			26.1						32.98	31.88	
							Chd. T.M. - T.M.		24.19		
							Calc. - W.H.S.				
							Calc. - W.H.S.				
							Calc. - W.H.S.				
							Chd. - B.F.M.				
							Chd. - B.F.M.				

✓ M.D.E

Calc. - W.H.S. ✓ w. H.S.

✓ w. H.S.

Calc. - W.H.S. Calc. - W.H.S. Calc. - W.H.S. Calc. - W.H.S.

Chd. - B.F.M.

Chd. - B.F.M.

Sta.	Grade	Elev	Dist	L.C.	g	P.C.	End Area	Av End Area	cu. Yds	cu. Yds.	cu. Yds
7	+51.1	365.2 ✓	371.7	$\frac{5.7}{2.25}$ ✓	6.5	$\frac{7.7}{2.68}$ ✓	29.80 ✓	1/4 C.L.			
			29.9						28.86 ↓	31.96 ✓ ↓	
	+81 ✓	363.2 ✓	369.2	$\frac{5.3}{2.25}$ ✓	6.0	$\frac{7.5}{2.63}$ ✓	27.92 ✓				
			19.0						27.12 ↓	19.08 ✓ ↓	
743		360.6 ✓	366.4	$\frac{5.4}{2.25}$ ✓	5.8	$\frac{6.4}{2.35}$ ✓	26.32 ✓				
			25.0						26.66 ↓	24.69 ✓ ↓	
	+25	357.2 ✓	363.2		6.0		27.00 ✓				
			25.0						26.55 ↓	24.58 ✓ ↓	
7	+50	353.9 ✓	359.7		5.8		26.10 ✓				
			25.0						27.24 ↓	25.22 ✓ ↓	
	+75 ✓	350.5 ✓	356.8		6.3		28.37 ✓				
			25.0						28.37 ↓	26.27 ✓ ↓	
									151.80 ✓		

✓ M.D.E

calc. - w. H.S. ✓ w. H.S.

✓ M.D.E

✓ w. H.S.

Chd. T.M.M.

calc. - w. H.S.

calc. - w. H.S.

Chd. - B.F.M.

calc. - w. H.S.

Chd. B.F.M.

Up to 9 included
in May Est.4955.62 cu. yds.
100%

Sta.	Grade	Elev.	Dist.	L.C.	Φ	P.C.	End. Area	Av. End Area	cu. Yds	cu. Yds.	cu. Yds.
744	347.7 ✓	354.0			6.3 ✓		28.37 ✓				
			25.0				29.08 ✓	26.93 ✓			
+25	345.0 ✓	351.6			6.6 ✓		29.79 ✓				
			25.0				29.32 ✓	27.15 ✓			
+50	342.2 ✓	348.6			6.4 ✓		28.84 ✓				
			50.0				27.25 ✓	50.46 ✓			
745	336.6 ✓	342.3			5.7 ✓		25.65 ✓				
			25.0				26.78 ✓	24.80 ✓			
+25 ✓	333.8 ✓	340.0			6.7 ✓		27.91 ✓				
			25.0				27.00 ✓	25.00 ✓			
						Ch. T.M.M.		154.34 ✓			

M.P.E

calc. w. H.S.

calc. w. H.S.
Chd - B.F.M.Calc. - w. H.S.
Chd - B.F.M.

Sta.	Grade	Elev.	Dist.	L.C.	¢	P.C.	End. Area	Av. End Area	cu. yds.	cu. Yds.	cu. yds.
747	325.2	331.0			5.8		26.10				
			25.0					24.98	23.13		
+25	325.2	330.5			5.3		23.85				
			35.0					24.75	32.08		
+60	325.2	330.9			5.7		25.65				
			34.6					27.48	35.22	36.23	
			35.6								
+95.6	325.2	331.7			6.5		29.31				
			10.4					33.71	12.99	11.94	
			9.4								
748+05	324.4	332.6			8.7		38.11				
			25.0					40.74	31.72		
+30	322.4	331.5			9.1		43.37				
			24.6					36.11	32.90	17404	
			calc - w. H.S.					calc - w. H.S.	calc - w. H.S.	17386	
			M.O.E					chk - B.F.M.	chk - B.F.M.		

Sta	Grade	Elev	Dist	L.C.	Q ₁	P.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds	Cu. Yds
+54.6	320.4	326.8			6.4		28.84				
			19.4				38.96		27.99		
+74	312.0	321.7			9.7		49.07				
			26.0				50.36		48.49		
749	300.7	311.1			10.4		51.64				
			12.0				50.98		22.66		
+12	295.5	305.7			10.2		50.31				
			8.0				47.14		13.97		
+20	292.0	301.2			9.2		43.96				
			5.0				38.62		7.15		
+25	290.2	297.5			7.3		33.28				
			13.0				45.59		21.95		
									142.21		

V.A.L.L.
 Chd. T.M.M.
 calc. w. H.S. calc. w. H.S. calc. w. H.S.
 Chd. B.F.M. Chd. B.F.M. Chd. B.F.M.

M.R.E.
 Road
 calc. w. H.S.
 M.O.S.

Sta	Grade	Elev.	Dist.	L.C.	¢	P.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
+38	285.6 ✓	296.9	↓ Road		11.3		57.90 ✓	V.A.L.L.			
			12.0					45.33 ✓	20.15 ✓		
+50	281.4 ✓	288.6			7.2		32.76 ✓				
			10.0					29.88 ✓	11.07 ✓		
+60	277.8 ✓	283.8			6.0		27.00 ✓				
			40.0					25.88 ✓	38.34 ✓		
750 ✓	263.6 ✓	269.1			5.5		24.75 ✓				
			17.0					25.20 ✓	15.87 ✓		
+17	258.2 ✓	263.9			5.7		25.65 ✓				
			18.0					27.48 ✓	18.32 ✓		
+35	252.4 ✓	258.9			6.5		29.31 ✓				
			24.9					28.61 ✓	26.38 ✓		
								130.13 ✓			
								calc. - w. H.S.	calc. - w. H.S.	calc. - w. H.S.	
								chd. B.F.M.	chd. B.F.M.	chd. B.F.M.	

M.R.E.

calc. - w. H.S.

chd. T.M.M.

calc. - w. H.S.

chd. B.F.M.

calc. - w. H.S.

chd. B.F.M.

Sta	Grade	Elev.	Dist	L.C.	Q	R.C.	End Area	Av. Area	Excavation Cu. Yds.	Pipe Contr. Cu. Yds.	Exc. Contr. Cu. Yds.
+59.9	244.4	250.6			6.2		27.91				
			28.9						25.66	27.47	
+88.8	236.4	241.6			5.2		23.40				
			11.2						21.15	8.77	
751	234.1	238.3			4.2		18.90				
			18.2						20.02	13.49	
+18.2	230.6	235.3			4.7		21.15				
			21.8						21.15	17.08	
+40	228.0	232.7			4.7		21.15				
			8.0						21.60	6.40	
+48	227.0	231.9			4.9		22.05				
			12.0						22.28	9.90	
									83.11		

V.B.L.L

✓ M.D.E

Calc. w.H.S

✓ M.D.E

Chd. T.M.M.

Calc. w.H.S.

Calc. w.H.S.
Chd. B.F.M.

Calc. w.H.S.
Chd. B.F.M.

Subtotal 7780.71

Sta.	Grade	Elev.	Dist.	H.C.	$\frac{1}{2}$	R.C.	End Area	Av. Area	Cu Yds.	Cur. Yds.	Cur. Yds.
+57	225.8	230.3		4.5		20.25		19.61			
			3.0					26.00	2.89		
+60	225.8	232.8		7.0		31.75					
			20.0					31.02	22.98		
+80	226.3	233.0		6.7		30.28					
			20.0					29.32	21.72		
753	226.7	233.0		6.3		28.37					
			28.0					27.68	28.71		
+78	227.3	233.3		6.0		27.00					
			22.0					24.75	20.17		
+50	227.8	232.8		5.0		22.50					
			25.0					22.72	21.04		
									117.51		

✓ M.P.E

Calc. w. H.S.

✓ M.P.E

Chd. T.M.M.

Calc. w. H.S. Calc. w. H.S.
Chd. B.F.M. Chd. B.F.M.Calc. w. H.S.
Chd. B.F.M.

Sta	Grade	Elev.	Dist	L.C.	ϕ	R.C.	End Area	Ax. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
								✓	✓	✓	
+75	229.1	234.2			5.1		22.95				
			9.0					36.97	12.32		
+84	229.6	239.9			10.3		50.99				
			5.8					49.04	10.53		
+89.8	229.9	239.6			9.7		47.09				
			36.4					41.50	55.95		
754+26.2	231.8	239.6			7.8		35.91				
			11.5					33.34	14.20		
+37.7	232.4	239.2			6.8		30.76				
			28.5					33.32	35.17		
+66.7	241.9	250.1			8.7		35.87				
			29.1					32.63	35.17		
									163.34		

✓ M.P.E.

calc. - w.H.S.

Chd. T.M.M.

calc. w.H.S. calc. w.H.S.

Chd - B.F.M.

calc. - w.H.S. Chd - B.F.M.

Sta	Grade	Elev.	Dist.	L.C.	±	R.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
								V.R.L.L.			
+50	267.9 ✓	271.9			4.0 ✓		18.00 ✓				
			20.0					20.25 ✓	15.00 ✓		
+70	270.1 ✓	275.1			5.0 ✓		22.50 ✓				
			30.0					24.08 ✓	26.76 ✓		
757.	273.4 ✓	279.1			5.7 ✓		25.65 ✓				
			23.0					26.78 ✓	22.81 ✓		
+23	275.9 ✓	282.1			6.2 ✓		27.91 ✓				
			27.0					27.00 ✓	27.00 ✓		
+50	278.8 ✓	284.6			5.8 ✓		26.10 ✓				
			25.0					26.55 ✓	24.58 ✓		
+75	281.6 ✓	287.6			6.0 ✓		27.00 ✓				
			25.0					25.88 ✓	23.96 ✓		
									140.11 ✓		

M.D.E

Calc. w.H.S.

Cld. T.M.M.

Calc. w.H.S.

Cld. B.F.M.

Calc. w.H.S.

Cld. B.F.M.

Sta	Grade	Elev.	Dist.	L.C.	ϕ	R.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
758	285.1	290.6			5.5		24.75				
			25.0					25.92	23.54		
+25	288.7	294.5			5.8		26.10				
			25.0					26.55	24.58		
+50	297.2	298.2			6.0		27.00				
			15.0					27.00	15.00		
+65	294.4	300.4			6.0		27.00				
			35.0					26.78	34.71		
759	299.2	305.2			5.9		26.55				
			10.0					27.93	10.34		
+10	300.8	307.3			6.5		29.31				
			15.0					30.04	16.69		
									12.486		

✓ M.P.E.

calc. - w.H.S.

✓ M.P.E.

Chd. T.M.M.

calc. - w.H.S.

Chd. B.F.M.

calc. - w.H.S.

Chd. B.F.M.

Sta.	Grade	Elev.	Dist.	G.C.	¢	R.C.	End Area	At. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
730	341.2	346.9			5.7		25.65	27.91	19.84		
			20.0				26.78	27.68	19.84		
750	344.4	350.6			6.2		27.91	27.68	27.68		
			21.0				27.68	27.68	27.68		
777	350.0	356.1		$\frac{6.0}{2.25}$	6.1	$\frac{6.2}{2.30}$	27.45	27.16	23.14		
			23.0				27.16	23.14	23.14		
762	354.8	360.7		$\frac{5.5}{2.25}$	5.9	$\frac{6.6}{2.40}$	26.88	25.25	5.42		
			5.8				25.25	5.42	5.42		
705.8	356.0	361.1		$\frac{4.8}{2.25}$	5.1	$\frac{6.0}{2.25}$	23.62	24.75	13.02		
			14.2				24.75	13.02	13.02		
720	358.5	364.4		$\frac{5.2}{2.25}$	5.9	$\frac{6.0}{2.25}$	25.88	25.30	14.34		
			15.3				25.30	14.34	14.34		
									158.44		103.44

✓ M.D.E.

calc. w. H.S.

✓ M.D.E.

calc. w. H.S.

calc. - w. H.S.
chk - B.F.M.calc. - w. H.S.
chk - B.F.M.

Sta.	Grade	Elev.	Dist	L.C.	$\frac{1}{2}$	R.C.	End Area	Ave. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
+35.3	361.1	366.6		$\frac{4.6}{2.25}$ ✓	5.5	$\frac{6.4}{2.35}$ ✓	24.72 ✓				
			29.9					23.27 ✓	25.77 ✓		
+65.2	364.2	369.3		$\frac{4.3}{2.25}$ ✓	5.1	$\frac{4.9}{2.25}$ ✓	21.82 ✓				
			14.8					21.37 ✓	11.71 ✓		
+80	364.7	369.4		$\frac{4.1}{2.25}$ ✓	4.7	$\frac{5.1}{2.25}$ ✓	20.92 ✓				
			15.2					21.09 ✓	11.87 ✓		
+95.2	365.2	369.9		$\frac{3.5}{2.25}$ ✓	4.7	$\frac{4.0}{2.25}$ ✓	21.26 ✓				
			17.8					24.71 ✓	16.29 ✓		
763+13	365.2	371.6		$\frac{5.4}{2.25}$ ✓	6.4	$\frac{6.8}{2.45}$ ✓	28.16 ✓				
			9.51					27.64 ✓	9.74 ✓		
				$\frac{5.2}{2.25}$ ✓	6.0	$\frac{6.9}{2.48}$ ✓	27.11 ✓		75.38 ✓		

$$\begin{array}{r} +22.51 \\ +49.88 \\ \hline \end{array}$$

m. D. E.

Contd. on Page 62. This Book

calc. - w. H.S.

✓ m. D. E.

Chd. T.M.M.

Calc. - w. H.S.

Calc. - w. H.S.

Chd. B.F.M.

Calc. - w. H.S.

Chd. B.F.M.

Subtotal - 8921.60

Additional Ydg. Handled By, Exc. Contractor.

Sta.	Cut x Width	End Area	Ave. Area	Cu. Yds.
710+00	6.57 x 4.5	25.65	24.075	44.58
710+50	5.0 x 4.5	22.50	21.825	40.42
711+00	4.7 x 4.5	21.15	21.375	39.58
711+50	4.8 x 4.5	21.60	22.50	41.67
712+00	5.2 x 4.5	23.40		
				166.25
740+25	8.3 x 4.5	37.35	34.20	63.33
740+75	6.9 x 4.5	31.05	34.425	63.75
741+25	8.4 x 4.5	37.80	37.35	69.17
741+75	8.2 x 4.5	36.90	34.875	64.58
742+25	7.3 x 4.5	32.85	28.80	58.67
742+80	5.5 x 4.5	24.75		
				319.50
				485.75

Comptd. M.D.E.

See Field Book #283 pages 79, 43, & 42.

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Sta.	Cut x Width	End Area	Ave. Area	Cu. Yds.
775+50	4.5 x 4.5	20.25	26.55	49.17
776+00	7.3 x 4.5	32.85	33.975	31.46
776+25	7.8 x 4.5	35.10	36.225	33.54
776+50	8.3 x 4.5	37.35	36.675	33.96
776+75	8.0 x 4.5	36.00	36.225	33.54
777+00	8.1 x 4.5	36.45	36.45	33.75
777+25	8.1 x 4.5	36.45	35.55	32.92
777+50	7.7 x 4.5	34.65	33.525	31.84
777+75	7.2 x 4.5	32.40	29.475	27.29
778+00	5.9 x 4.5	26.55	23.40	21.67
778+25	4.5 x 4.5	20.25	18.90	17.50
778+50	3.9 x 4.5	17.55		
				345.84

Comptd. M.D. Elliott

Sta.	Grade	Elev.	Dist.	L.C.	±	R.C.	End Area	Av. E. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
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Contd. from Page 59. This Book

Jan. 21, 1930 Converse - Notes
 Clear Warm Hill - Grades
 Elliott - Sick
 Simpson -
 Walton

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Sta.	Grade	Elev.	Dist.	L.C.	Φ	R.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
<u>EQUATION</u>											
		$\frac{763+22.51}{763+49.88}$	365.20	371.2	$\frac{5.2}{2.25}$	6.0	$\frac{6.9}{2.48}$	27.11			
			50.12					27.31		50.70	
764		365.20	371.4	$\frac{4.2}{2.25}$	6.2	$\frac{7.8}{2.70}$	27.50				
			50.0					29.73		55.06	
+50		365.20	371.6	$\frac{5.0}{2.25}$	6.4	$\frac{10.4}{3.35}$	31.95				
			50.0					30.49		56.46	
765		365.20	371.2	$\frac{5.0}{2.25}$	6.0	$\frac{8.8}{2.95}$	29.02				
			54.8					24.95		50.64	
+54.8		365.2	369.3	$\frac{3.4}{2.25}$	4.1	$\frac{7.2}{2.55}$	20.87				
			30.0					23.01		25.57	
+84.8		364.2	369.5	$\frac{4.2}{2.25}$	5.3	$\frac{7.7}{2.68}$	25.15				
			15.2								
							Chd. T.M.M.	30.18		$\frac{16.99}{255.42}$	
							35.20			Calc. - W.H.S.	
										M.D.E.	

Sta	Grade	Elev.	Dist.	L.C.	Φ	R.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
770+95.1	365.0	370.5	54.9	$\frac{4.8}{2.25}$	5.5	$\frac{7.4}{2.6}$	26.01	25.87	52.60		
771+50	363.7	369.2	50.0	$\frac{5.4}{2.25}$	5.5	$\frac{6.5}{2.38}$	25.73	26.37	48.83		
772	362.6	368.6	20.0	$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00	25.48	18.87		
+20	362.1	367.2	30.0	5.1	5.1	$\frac{6.0}{2.25}$	23.96	25.25	28.06		
+50	361.4	367.1	20.0	$\frac{5.6}{2.25}$	5.7	$\frac{6.6}{2.40}$	26.42 26.53	26.88	19.91		
+70	360.9	366.9	37.5	$\frac{5.2}{2.25}$	6.0	$\frac{7.0}{2.5}$	27.23	26.32	36.56		
							Chd. T.M. M.	25.40	204.83		
									Calc. M.P.S.		
									- W.H.S.		

Sta	Grade	Elev.	Dist.	L.C.	$\frac{1}{2}$	P.C.	End Area	Av. Area	Cu. Yds.	Cu. Yds.	Cu. Yds.
773+07.5	360.1	365.5	32.5	$\frac{5.4}{2.25}$	5.4	$\frac{6.4}{2.35}$	25.40		26.32	31.68	
+40	359.2	365.2	5.0	$\frac{5.4}{2.25}$	6.0	$\frac{6.8}{2.45}$	27.23		28.81	5.34	
+45	359.1	365.9	62.5	$\frac{6.0}{2.25}$	6.8	$\frac{7.3}{2.58}$	30.39		25.77	59.65	
774+07.5	357.2	361.9	30.0	4.7	4.7	4.7	21.15		22.05	24.50	
+37.5	357.2	362.3	37.5		5.1		22.95		24.75	34.38	
+75	360.0	365.9	25.0		5.9		26.55		27.06	25.06	
						Chd. I.M.M.	27.56		180.41		
									Calc. - w. H.S.		
									M.O.E.		

Sta.	Grade	Elev.	Dist.	L.C.	Φ	T.P.C.	End. Area	Av. Area	Cu. Yds	Cu. Yds	Cu. Yds
775	361.9	367.9	30.0	$\frac{6.0}{2.25}$	6.0	$\frac{6.5}{2.33}$	27.56 ✓				
									28.80 ✓	32.00 ✓	
+30	364.1	370.7	20.0	$\frac{6.0}{2.25}$	6.6	$\frac{7.4}{2.6}$	30.03 ✓				
									30.06 ✓	22.27 ✓	
+50	365.6	371.7	20.0	$\frac{5.2}{2.25}$	6.1	$\frac{9.3}{3.08}$	30.08 ✓				
									32.79 ✓	24.29 ✓	
+70	365.6	372.6	30.0	$\frac{6.0}{2.25}$	7.0	$\frac{11.0}{3.50}$	35.50 ✓				
									37.44 ✓	41.60 ✓	
776	365.5	372.9	30.0	$\frac{6.5}{2.33}$	7.4	$\frac{12.6}{3.9}$	39.38 ✓				
									38.97 ✓	43.30 ✓	
+30	368.5	372.8	20.0	$\frac{7.3}{2.58}$	7.3	$\frac{11.4}{3.6}$	38.56 ✓				
									35.65 ✓	26.41 ✓	
											189.87 ✓
							Chd. T.M.M.				
							32.74				
											Calc. M.A.S. V-W.H.S.

Sta	Grade	Elev.	Dist.	L.C.	$\frac{L}{2}$	P.C.	End Area	Av. Area	Cu Yds	Cu Yds	Cu Yds
								$\frac{1}{2} R.C.L.$			
776+50	365.5	372.4		$\frac{6.0}{2.25}$	6.9	$\frac{7.0}{3.0}$	32.74				
			25.0					34.46	31.91		
+25	365.5	373.1		$\frac{6.6}{2.4}$	7.6	$\frac{9.6}{3.15}$	36.17				
			25.0					38.86	35.98		
777	365.4	374.0		$\frac{7.2}{2.55}$	8.6	$\frac{10.8}{3.45}$	41.55				
			25.0					49.09	45.45		
+25	365.4	376.4		$\frac{8.8}{2.95}$	11.0	$\frac{13.7}{4.18}$	56.63				
			10.0					58.98	21.84		
+35	365.4	377.3		$\frac{8.9}{2.98}$	11.9	$\frac{14.4}{4.35}$	61.33				
			15.0					56.47	31.37		
+50	365.4	376.2		$\frac{8.6}{2.9}$	10.8	$\frac{16.4}{3.6}$	51.60				
			25.0					44.51	41.21		
							Chd. T.M.M.	37.41	507.76		
								calc. - W.H.S.			
								M. R. B.			

Subtotal 1194.68

Sta	Grade	Elev.	Dist.	L.C.	$\frac{L}{2}$	P.C.	End Area	Av. Area	Cu. Yds	Cu. Yds	Cu. Yds
									$\sqrt{A.C.L.}$		
+75	365.1	373.1	25.0	$\frac{7.0}{2.5}$	8.0	$\frac{9.3}{3.08}$	37.41	32.85	30.42		
778	364.7	370.9	25.0	$\frac{4.8}{2.25}$	6.7	$\frac{7.7}{2.73}$	28.29	23.65	21.90		
+25	364.4	368.3	25.0	$\frac{4.0}{2.25}$	3.9	$\frac{5.1}{2.25}$	19.01	16.65	15.42		
+50	364.0	366.9	25.0	$\frac{2.9}{2.25}$	2.9	$\frac{4.0}{2.25}$	14.29	14.18	13.13		
+75	363.7	366.7	25.0	$\frac{2.6}{2.25}$	3.0	$\frac{3.9}{2.25}$	14.06	17.21	15.94		
779	363.4	367.7	35.0	$\frac{4.0}{2.25}$	4.3	$\frac{5.5}{2.25}$	20.36	29.56	38.32		
						Chd. T.M.M.	38.75		135.13		
									M.O.B		
									V-W.H.S.		

Sta	Grade	Elev.	Dist	U.C.	q	R.C.	End Area	Av. Area	Cu Yds	Cu Yds	Cu Yds
+35	362.9	370.2	15.0	$\frac{6.6}{2.4}$	7.8	$\frac{11.1}{3.53}$	38.75	42.06	23.37		
+50	362.0	371.5	14.9	$\frac{7.6}{2.65}$	9.5	$\frac{11.1}{3.53}$	45.36	42.88	23.66		
+64.9	361.2	369.7	35.1	$\frac{7.4}{2.6}$	8.5	$\frac{10.6}{3.25}$	40.40	35.95	46.74		
780	357.7	364.5	50.0	$\frac{6.0}{2.25}$	6.8	$\frac{8.2}{2.20}$	31.50	27.68	51.26		
+50	352.7	358.0	10.0		5.3		23.85	25.43	9.42		
+60	350.9	356.9	15.0		6.0		27.00	28.16	15.64		
							Chd. T.M.M. 29.31		170.09	calc. - w. H.S. M.R.S.	

Sta	Grade	Elev.	Dist.	L.C.	4	P.C.	End Area	Av Area	Cu Yds	Cu Yds	Cu Yds
+75	348.3 ✓	354.8		$\frac{6.5}{2.38}$	6.5 ✓	$\frac{6.5}{2.38}$	29.31 ✓				
			25.0 ✓					28.16 ✓	26.07 ✓		
781	343.9 ✓	349.9			6.0 ✓		27.00 ✓				
			10.6 ✓					27.00 ✓	10.60 ✓		
+10.6	342.0 ✓	348.0			6.0 ✓		27.00 ✓				
			29.7 ✓					25.88 ✓	28.47 ✓		
+40.3	337.6 ✓	343.1			5.5 ✓		24.75 ✓				
			29.8 ✓					24.30 ✓	26.82 ✓		
+70.1	334.9 ✓	340.2			5.3 ✓		23.85 ✓				
			9.9 ✓					25.43 ✓	9.32 ✓		
+80	334.6 ✓	340.6			6.0 ✓		27.00 ✓				
			20.0 ✓					30.85 ✓	22.85 ✓		
							34.70		124.13 ✓		
									M.R. ✓		
									W.H.S. ✓		

V.A.L.L.

Sta.	Grade	Elev.	Dist	L.C.	\$	P.C.	End Area	Av. Area	Cu Yds	Cu Yds	Cu Yds
								$\frac{1}{2}A.C.L.$			
782	334.0	341.4	30.1	$\frac{7.2}{2.55}$	7.4	$\frac{8.3}{2.83}$	34.70		36.48	40.67	
+30.1	334.0	342.1	19.9	$\frac{7.8}{2.70}$	8.1	$\frac{8.9}{2.98}$	38.25		36.09	26.60	
+50	335.2	342.6	17.0	$\frac{6.8}{2.45}$	7.4	$\frac{8.1}{2.78}$	33.92		30.46	19.18	
+67	336.2	342.2	33.0	6.0	6.0	6.0	27.00		26.33	32.18	
783	339.1	343.8	15.0		5.7		25.65		26.33	14.63	
+15	339.0	345.0	10.0		6.0		27.00		27.92	10.34	
						Chd. T.M. T.M.	28.84			143.60	calc. - w. H.S.
										M.O.E.	

Sta	Grade	Elev.	Dist	U.C.	$\frac{U.C.}{L}$	R.C.	End Area	Av. Area	Cu. Yds	Cu. Yds	Cu. Yds
+85.1	361.9	370.0		$\frac{8.1}{2.78}$	8.1	$\frac{8.1}{2.78}$	37.56				
			14.9				37.56		20.73		
785+00	362.7	370.8		$\frac{8.1}{2.78}$	8.1	$\frac{8.1}{2.78}$	37.56				
			15.0				35.68		19.82		
+15	364.7	371.6		$\frac{7.4}{2.60}$	7.4	$\frac{7.4}{2.60}$	33.79				
			35.0				32.53		42.17		
+50	364.7	371.6		$\frac{6.9}{2.48}$	6.9	$\frac{6.9}{2.48}$	31.26				
			50.0				31.76		58.81		
786	365.3	372.4		$\frac{7.1}{2.53}$	7.1	$\frac{7.1}{2.53}$	32.26				
			50.0				33.03		61.17		
+50	366.0	373.4		$\frac{7.4}{2.60}$	7.4	$\frac{7.4}{2.60}$	33.79				
			25.0				35.68		33.04		
							37.56		235.74		
									2010. - W. H. S.		
									M. R. B.		

V.A.L.L.

33.04
235.74
2010. - W. H. S.
M. R. B.

Sta.	Grade	Elev.	Dist.	L.C.	q	R.C.	End Area	Av. Area	Cu Yds	Cu Yds	Cu Yds
+75	366.3	374.4		$\frac{8.1}{2.78}$	8.1	$\frac{8.1}{2.78}$	37.56				
			25.0					35.68	33.04		
787	366.7	374.1		$\frac{7.4}{2.60}$	7.4	$\frac{7.4}{2.60}$	33.79				
			50.0					31.08	57.56		
+50	367.4	373.7		$\frac{6.3}{2.33}$	6.3	$\frac{6.3}{2.33}$	28.37				
			25.0					27.69	25.64		
+75	367.7	373.7		$\frac{6.0}{2.25}$	6.0	$\frac{6.0}{2.25}$	27.00				
			25.0					27.92	25.85		
788	367.8	374.2		$\frac{6.4}{2.35}$	6.4	$\frac{6.4}{2.35}$	28.84				
			50.0					31.58	58.48		
+50	368.1	375.6		$\frac{7.5}{2.63}$	7.5	$\frac{7.5}{2.63}$	34.32				
			25.0					35.40	32.78		
							36.47		233.35		

Chd. T.M.M.

M.D.E.
W.A.S.

+79.8 365.0 ✓ 370.0

$\frac{6.0}{2.25}$ ✓

5.0 ✓

$\frac{4.1}{2.25}$ ✓

22.61 ✓

15.2 ✓

23.80 ✓

13.40 ✓

+95 362.8 ✓ 368.3

$\frac{5.7}{2.25}$ ✓

5.5 ✓

$\frac{5.5}{2.25}$ ✓

24.98 ✓

14.4 ✓

23.07 ✓

$\frac{12.30}{25.70}$ ✓

790+09.4 360.8 ✓ 365.5

$\frac{4.7}{2.25}$ ✓

4.7 ✓

$\frac{4.7}{2.25}$ ✓

21.15 ✓

Chd. T.M.M.

calc. + Chkd.
1/28/30
Elliott + Simpson

Contd. in Book # 293. Page 1.

Total Cu. Yds. Sta. 680+ to 790+
11,713.63. Figured twice A.C.L.
Chkd. M.R.E. 9/23/30

Total Cu. Yds of Standard Trench 11,713.63 ✓
Additional Cu. Yds (See page 60) 831.59 ✓
Total this book 12,545.22 ✓

1/22/30 Converse - Notes.
Clear + Warm Hill - Grades
Elliott -
Simpson - Sick
Walton

8/18/30

Simpson
Jacobsohn
Bliss
RemmenO.R.-S.D.-2nd Main Pipe LineProfile of New Steel Pipe, After Break in old W.S.
Pipe. (Sta. 692+00 to Sta. 700+00)

Sta.	+	H.I.		El. of Bottom of Pipe as is	El. ex. 246.11 - BM	Grade For Pipe as originally Put in
	12.45	258.56	-			Settled
92+50			8.44	250.12		250.25 0.13
T.P.	12.35	270.91	0.00		258.56	
69+00			13.02	257.89		258.00 0.11

8/18/30

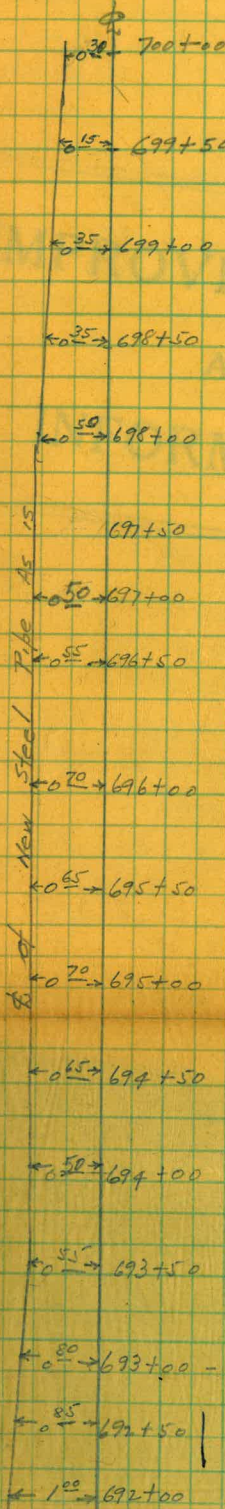
Simpson
Jacobszoon
Bliss
RemmenO.K.-S.D.-2nd Main Pipe LineProfile of New steel Pipe, After Break in old w.s.
Pipe (Sta. 692+00 to Sta. 700+00)

Sta.	+ 12.45	H.I. 258.56	-	El. of Bottom of Pipe as is	Elevs. 246.11 - B.M.	Grade For Pipe as originally Put in	Settled
692+50			8.44	250.12		250.25	0.13
T.P.	12.35	270.91	0.00		258.96		
694+00			13.02	257.89		258.00	0.11
693+50			7.45	263.46		263.50	0.04
T.P.	12.67	283.54	0.04		270.87		
694+00			14.98	269.06		269.00	0.06 Raised
694+50			10.63	272.91		273.25	0.34 Settled
695+00			6.42	277.12		277.50	0.38
T.P.	12.55	295.85	0.74		283.30		
695+50			13.81	282.04		282.30	0.26
696+00			8.97	286.88		287.00	0.12
T.P.	12.90	308.75	0.00		295.85		
696+50			15.84	292.91		293.55	0.64
697+00			9.26	299.49		300.00	0.51
T.P.	12.80	321.55	0.00		308.75		
697+50			15.74	305.81		306.00	0.19
698+00			9.76	311.79		312.00	0.21
T.P.	12.42	333.91	0.06		321.49		
698+50			17.60	316.31		316.60	0.29
699+00			12.86	321.05		321.20	0.15
699+50			11.30	322.61		322.70	0.09
700+00			9.71	324.20		324.10	0.10 Raised

8/18/30

Simpson
Bliss
Jacobszoon
Remmert

Note: These measurements are
from a line 75' from the old
W.S. pipe. The pipe may or
may not have been laid on
this exact line originally.



Note: This point is about where
The pipe originally started
to swing out to 75' from
old W.S. Pipe, it being 62'
from W.S. pipe across
Trestle Sta. 691 to Sta. 692

of Pipe as
originally put in
East of W.S. Pipe

~~Grade at 718+45
Sta. 725+50. 2° higher than
shown.~~

~~Grade from 729+50 to 732+59.97
Print shows -1.109 should be -1.061.~~

~~Curve at Sta. 769+77.81
Should be 24° instead of 16°~~

17°30' 767+2016
 95.37

 768+1553
 2.53