

1443

MAZ

See Book "1441/2 for Location of Sections "B," "D" & "F"

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**THE FREDERICK POST CO.**  
ENGINEERING and DRAFTING SUPPLIES  
IRVING PARK STATION  
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SERA WEEKLY COST SEGREGATION SHEET

NAME OF PROJECT Recreational Area

NO 38-B11-4A

WEEK ENDING

WED Nov 28-34  
THURS

Kind of Work	Charge	Fri. <i>Thu</i>	Sat. <i>Fri</i>	Mon. <i>Sat</i>	Tues. <i>Mon</i>	Wed. <i>Tue</i>	Thurs. <i>Wed</i>	Total
DRILLING HOLES	SERA Payroll	12.75						
	Supervision	.44						
	Spons. Labor	4.28						
	Equip. Rental	24.00						
	Mat'l Spons. " CWA SERA							
RAVING ROCK	SERA Payroll	10.35						
	Supervision	.30						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA							
SURFACE ROQUE COURT	SERA Payroll	19.95						
	Supervision	.90						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA							
PF-CYR	SERA Payroll	12.55						
	Supervision	.40						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA							
EXTEM	SERA Payroll	18.75						
	Supervision	.90						
	Spons. Labor							
	Equip. Rental	1.50						
	Mat'l Spons. " CWA SERA							
PLANTING TREES	SERA Payroll	13.95						
	Supervision	.50						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA	17.00						
CULTIVATING WATERING	SERA Payroll	5.33						
	Supervision	.20						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA							
Pouring Concrete	SERA Payroll	19.95						
	Supervision	.90						
	Spons. Labor							
	Equip. Rental	1.50						
	Mat'l Spons. " CWA SERA	29.13						
Spreading Dirt	SERA Payroll	6.00						
	Supervision	.50						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA							
Pick Ex.	SERA Payroll	11.35						
	Supervision	.40						
	Spons. Labor							
	Equip. Rental							
	Mat'l Spons. " CWA SERA							
Total This Sheet								
Brought Forward								
Total								

Fill out this form completely and send in a copy with the WEEKLY REPORT

SIGN

Clerk

5.90  
5.48  
5.69 .42

5.48  
21  
5.48  
5.79

5.90  
21  
5.69

569

The State of Michigan  
 Department of Transportation  
 Bureau of Road Construction  
 Lansing, Michigan

27902 4.16	274.86	274.4	274.4	4.62	80	4.12	279.02 H.I.	27440	4.62	50	27902	273.55	5.07	50	27902	273.55	5.07	50
27902	274.4	274.4	274.4	4.62	80	4.12	279.02 H.I.	27440	4.62	50	27902	273.55	5.07	50	27902	273.55	5.07	50
27902	274.4	274.4	274.4	4.62	80	4.12	279.02 H.I.	27440	4.62	50	27902	273.55	5.07	50	27902	273.55	5.07	50
27902	274.4	274.4	274.4	4.62	80	4.12	279.02 H.I.	27440	4.62	50	27902	273.55	5.07	50	27902	273.55	5.07	50

27902  
4.16

274.86  
274.4  
274.4

4.62  
80  
4.12

279.02 H.I.  
27440

4.62  
50

0+00 4.12 Rod

27902  
273.55

5.07  
50

0+284.57 Rod

27902  
273.55

5.47  
50

+53 497 Rod

27902  
274.40

0+00 4.62 Rod

0+35, 5.07

27902  
273.20

5.82

27902  
273.55

5.07

27902  
273.55

5.47

indexed  
a.s.k.

CROSS SECTION

of

RECREATION AREA

N.E. Section

BALBOA PARK

3-3-'32

Drebert	Chief
Walton	Inst. 3-3 to 3-8
Bailey	Hd. Ch. 3-3 to 3-8
Kanagy	Rr. Ch. 3-3 to 4-5
Elder	Inst. 3-8 to 3-10
Bell	Hd. Ch. 3-8 to 4-5
Clavert	3-12
Keyser	3-14 to 4-5
Mosien	4-5
Olmsted	4-5
De Perini	4-5

For Map and instruction and description  
see pages 1 and 2 of book # 1441.

Further reference, page 33, book # 1426

This book contains only sections  
east of Texas St. base line.  $\notin$

Survey of Sewer line from field  
house and swimming pool to  
Main in Florida St. Canyon  
See page 34

3-10-32

Rebert  
Elder &  
Kamagy  
Bell

CROSS SECTION of Section "B." (700' East of Texas  
St. base line & 600' So. of 0+00).

	+	H.I.	-
E.T. Line Texas N. Prop. Maps	3.44	284.36	280.92

B.L. +25

0+00	3.85	280.6
0+25	4.3	280.1
0+50	4.9	279.5
0+75	5.0	279.4
1+00	5.4	279.0
+25	5.7	278.7
+50	6.0	278.4
+75	6.0	278.4
2+00	6.2	278.2
+25	6.3	278.1
+50	6.1	278.3
+75	5.9	278.5
3+00	5.3	279.1
+25	4.9	279.5
+50	4.7	279.7
+75	3.9	280.5
4+00	4.0	280.4
+25	4.1	280.3
+50	3.9	280.5
+75	3.9	280.5
5+00	3.8	280.6

973  
3-12-32

	+	H.l.	-
		284.36	
B.L. +25			
5+25		3.5	280.9
+50		3.8	280.6
+75		4.5	279.9
6+00		5.1	279.3
A			
6+00		4.0	280.4
5+75		3.6	280.8
+50		3.3	281.1
+25		3.3	281.1
+00		3.3	281.1
4+75		3.1	281.3
+50		3.2	281.2
+25		3.1	281.3
+00		3.3	281.1
3+75		3.4	281.0
+50		4.2	280.2
+25		4.6	279.8
+00		5.0	279.4
2+75		5.5	278.9
+50		6.1	278.3
+25		6.6	277.8
+00		6.6	277.8
1+75		6.3	278.1

	+	H.l.	-
		284.36	
A			
1+50		6.0	278.4
+25		6.0	278.4
+00		5.5	278.9
0+75		5.4	279.0
+50		5.1	279.3
+25		4.3	280.1
+00		3.78	280.6
A+25			
0+00		4.00	280.4
+25		4.3	280.1
+50		4.8	279.6
+75		5.4	279.0
1+00		5.9	278.5
+25		6.3	278.1
+50		6.7	277.7
+75		6.8	277.6
2+00		7.1	277.3
+25		7.1	277.3
+50		6.4	278.0
+75		5.5	278.9
3+00		4.7	279.7
+25		4.3	280.1
+50		3.3	281.1

	+	H.I.	-
		284.36	
A+25			
3+75		2.9	281.5
4+00		2.4	282.0
+25		2.0	282.4
+50		2.2	282.2
+75		2.2	282.2
5+00		2.3	282.1
+25		2.5	281.9
+50		2.6	281.8
+75		3.1	281.3
6+00		3.4	281.0
B			
6+00		2.9	281.5
5+75		2.5	281.9
+50		2.1	282.3
+25		1.5	282.9
+00		1.3	283.1
4+75		1.7	282.7
+50		1.8	282.6
+25		1.9	282.5
+00		2.2	282.2
3+75		2.6	281.8
+50		3.1	281.3
+25		4.1	280.3

	+	H.I.	-
		284.36	
B			
3+00		5.0	279.4
2+75		5.9	278.5
+50		6.6	277.8
+25		7.6	276.8
+00		7.9	276.5
1+75		7.8	276.6
+50		7.2	277.2
+25		6.5	277.9
+00		5.9	278.5
0+75		5.4	279.0
+50		4.8	279.6
+25		4.6	279.8
+00		4.56	279.8
B+25			
0+00		5.56	278.8
+25		5.3	279.1
+50		5.5	278.9
+75		5.7	278.7
1+00		6.3	278.1
+25		6.7	277.7
+50		7.5	276.9
+75		8.3	276.1
2+00		8.9	275.5



	+	H.L.	-
		284.36	
B+25			
2+25		8.7	275.7
+50		7.8	276.6
+75		6.4	278.0
3+00		5.7	278.7
+25		4.9	279.5
+50		3.6	280.8
+75		2.9	281.5
4+00		2.5	281.9
+25		1.9	282.5
+50		1.8	282.6
+75		1.6	282.8
5+00		1.5	282.9
+25		1.6	282.8
+50		1.7	282.7
+75		2.2	282.2
6+00		2.7	281.7
C			
6+00		3.0	281.4
5+75		2.6	281.8
+50		2.4	282.0
+25		2.4	282.0
+00		2.3	282.1
4+75		2.3	282.1

C

	+	H.L.	-
		284.36	
4+50		2.2	282.2
+25		2.9	281.5
+00		3.4	281.0
3+75		3.9	280.5
+50		4.6	279.8
+25		5.4	279.0
+00		6.8	277.6
2+75		7.8	276.6
+50		9.2	275.2
+25		10.1	274.3
+00		9.9	274.5
1+75		9.0	275.4
+50		8.1	276.3
+25		7.6	276.8
+00		7.2	277.2
0+75		6.7	277.7
+50		6.6	277.8
+25		6.6	277.8
+00		6.76	277.6
C+25			
0+00		7.96	276.4
+25		7.8	276.6
+50		7.7	276.7

+ H.I. -  
284.36

C+25

0+75	7.6	276.8
1+00	8.1	276.3
+25	8.3	276.1
+50	8.8	275.6
+75	9.7	274.7
+90	11.1	273.3
2+00	11.1	273.3
+25	10.4	274.0
+50	9.9	274.5
+75	9.2	275.2
3+00	8.4	276.0
+25	7.2	277.2
+50	6.4	278.0
+75	5.7	278.7
4+00	5.1	279.3
+25	4.5	279.9
+50	4.4	280.0
+75	4.4	280.0
5+00	4.1	280.3
+25	4.0	280.4
+50	3.6	280.8
+75	3.6	280.8
6+00	4.0	280.4

II

+	H.I.	-
6+00	5.8	278.6
5+75	5.6	278.8
+50	5.7	278.7
+25	6.3	278.1
+00	6.1	278.3
4+75	6.0	278.4
+50	6.1	278.3
+25	6.6	277.8
+00	7.4	277.0
3+75	8.0	276.4
+50	9.2	275.2
+25	10.3	274.1
+00	10.4	274.0
2+75	10.4	274.0
+50	10.3	274.1
II+09, 2+50	10.4	274.0
II+15, 2+50	12.9	271.5
II, 2+25	10.5	273.9
II+11, 2+25	11.0	273.4
II+17, 2+25	12.3	272.1
II, 2+00	10.9	273.5
1+75	11.7	272.7
+50	11.5	272.9

5

1547  
0138  
1/24

Sta	18' Rt Grade	¢ Grade	18' Lt Grade	Sta Dett.
46+00	253.50	254.00	254.50	
45+50	253.21	253.68	254.01	
45+00	252.93	253.36	253.52	
44+50	252.63	253.04	253.03	
44+00	252.50	252.88	252.72	
43+50	252.67	253.03	252.77	
43+00	253.06	253.41	253.08	
42+50	253.75	254.10	253.75	
42+00	254.70	255.05	254.70	
41+50	255.65	256.00	255.65	
41+00	256.60	256.95	256.60	
40+50	257.64	257.99	257.64	
40+00	258.35	258.60	258.47	
39+50 <sup>07</sup>	258.90	259.10	259.30	E.C. 10°47.5' R=200
39+25	259.02	259.35	259.69	7°12' Δ=21°-35Rt
39+12 <sup>90</sup>	259.08	259.48	259.88	L=75.34
39+00	259.27	259.60	259.94	3°37' S.T=38.12
38+74 <sup>73</sup>	259.65	259.85	260.05	B.C Def perft=8.599
38+32 <sup>60</sup>	260.35	260.30	260.25	
37+90 <sup>55</sup>	261.05	260.75	260.45	E.C. 57°30' R=150
37+75	261.52	260.98	260.56	54°32' Δ=115° Lt
37+50	261.95	261.36	260.75	49°45' L=301.07
37+25	262.32	261.73	261.12	44°59' L Ch 253.02 Of=11.459'

70 80  
69 85  
85

64556

Sta	18' RT Grade	Ln Grade	18' Lt Grade	Sta Df	Curve Data
37+00	262.70	262.11	261.50	40°12'	
36+75	263.07	262.48	261.87	35°26'	
36+50	263.45	262.85	262.25	30°39'	
36+25	263.82	263.23	262.62	25°53'	
36+00	264.20	263.60	263.00	21°06'	
35+75	264.57	263.98	263.38	16°20'	
35+50	264.95	264.35	263.75	11°34'	
35+25	265.26	264.73	264.24	6°47'	
35+00	265.45	265.12	264.74	2°01'	
34+89 <sup>48</sup>	265.55	265.28	264.95	PC.	
34+50	265.80	265.87	265.80		
33+99 <sup>48</sup>	266.30	266.63	266.90	PT. 45°00'	
33+75	266.52	266.99	267.42	40°08'	
33+50	266.75	267.37	267.95	35°09'	R=144
33+25	267.12	267.74	268.32	30°11'	Δ=90° Rf.
33+00	267.50	268.12	268.70	25°13'	L=226.19
32+75	267.85	268.50	269.07	20°14'	Lch=203.65
32+50	268.25	268.87	269.45	15°16'	Df=11.937'
32+25	268.72	269.24	269.73	10°17'	
32+00	269.19	269.62	270.00	5°19'	
31+73 <sup>29</sup>	269.70	270.00	270.30	PC.	
31+32	270.60	270.56	270.70		
30+91 <sup>29</sup>	271.18	270.98	270.78	PT.	

	+	H.I.	-
		284.36	
C+40, 1+50		9.4	275.0
Π, 1+37		9.5	274.9
1+25		9.0	275.4
+00		8.9	275.5
0+75		8.6	275.8
+50		8.6	275.8
+25		8.7	275.7
+00		8.14	276.3
Π+25			
0+00		10.40	274.0
+25		9.7	274.7
+50		9.8	274.6
+75		9.5	274.9
1+00		9.6	274.8
+15		9.8	274.6
+25		11.7	272.7
+50		12.0	272.4
+75		11.3	273.1
2+00		11.5	272.9
+25		12.2	272.2
+50		13.6	270.8
+63		13.4	271.0
+66		11.5	272.9

	+	H.I.	-
		284.36	
Π+25			
2+75		12.1	272.3
3+00		12.4	272.0
+25		11.5	272.9
+50		11.3	273.1
+75		10.8	273.6
4+00		10.4	274.0
+25		9.8	274.6
+50		9.4	275.0
+75		9.0	275.4
5+00		8.5	275.9
+25		8.4	276.0
+50		8.5	275.9
+75		8.6	275.8
6+00		8.9	275.5
RP Rock Π+25, 2+75	2.74	275.24 ✓	11.86 272.50 ✓
E			
6+00		3.0	272.2
5+75		2.7	272.5
+50		2.4	272.8
+25		2.1	273.1
+00		2.6	272.6
4+75		2.9	272.3
+50		2.7	272.5

	+	H.I.	-	
		275.24		
E				
4+25			3.0	272.2
+00			3.2	272.0
3+75			3.6	271.6
+50			4.2	271.0
+25			4.5	270.7
+00			4.6	270.6
2+90			4.4	270.8
+75			4.4	270.8
+60			4.4	270.8
+50			4.9	270.3
+25			3.9	271.5
+00			2.6	272.6
1+75			2.0	273.2
+70			2.7	272.5
+50			2.6	272.2
+25			3.3	271.9
+05			2.8	272.4
+00			1.3	273.9
0+75			1.0	274.2
+50			1.1	274.1
+25			1.2	274.0
+00			2.51	272.7

	+	H.I.	-	
		275.24		
E+25				
0+00			3.75	271.5
+25			2.4	272.8
+30			1.3	273.9
+50			1.5	273.7
+75			1.5	273.7
+90			1.7	273.5
+95			2.9	272.3
1+00			3.1	272.1
+25			3.0	272.2
+50			2.8	272.4
+75			2.2	273.0
2+00			3.1	272.1
+25			4.3	270.9
+50			5.3	269.9
+75			5.4	269.8
3+00			5.5	269.7
+25			5.7	269.5
+50			5.4	269.8
+75			5.3	269.9
4+00			5.1	270.1
+25			5.0	270.2
+50			5.0	270.2
+75			5.3	269.9

	+	H.l.	-
		275.24	
E+25			
5+00		5.4	269.8
+25		5.4	269.8
+50		5.1	270.1
+75		5.2	270.0
6+00		5.4	269.8
F			
6+00		7.4	267.8
5+75		7.1	268.1
+50		7.2	268.0
+25		7.1	268.1
+00		7.0	268.2
4+75		7.0	268.2
+50		6.7	268.5
+25		6.6	268.6
+00		6.5	268.7
3+75		6.5	268.7
+50		6.0	269.2
+25		6.0	269.2
+00		6.2	269.0
2+75		6.3	268.9
+50		6.5	268.7
+46		5.5	269.7
+25		4.6	270.6

	+	H.l.	-
		275.24	
F			
2+00		3.9	271.3
1+75		3.3	271.9
+50		3.0	272.2
+40		2.9	272.3
+35		3.6	271.6
+25		3.5	271.7
+00		3.9	271.3
0+75		3.5	271.7
+50		3.4	271.8
E+47		2.4	272.8
0+50		4.0	271.2
+25			
+00		4.99	270.2
F+25			
0+00		5.54	269.7
+25		4.5	270.5
+50		3.9	271.3
+75		3.9	271.3
1+00		3.9	271.3
+25		3.7	271.5
+50		3.8	271.4
+75		4.3	270.9
2+00		4.9	270.3
+25		5.6	269.6
+46		6.5	268.7

	+	H.I.	-	
		275.24		
F+25				
2+50			7.6	267.6
+75			7.0	268.2
3+00			6.7	268.5
+25			6.4	268.8
+50			6.4	268.8
+75			6.2	269.0
4+00			6.8	268.4
+25			7.4	267.8
+50			7.6	267.6
+75			7.6	267.6
5+00			8.2	267.0
+25			8.1	267.1
+50			7.8	267.4
+75			7.9	267.3
6+00			7.8	267.4
G				
6+00			8.2	267.0
5+75			8.6	266.6
+50			8.8	266.4
+25			9.2	266.0
+00			8.8	266.4
4+75			8.2	267.0
+50			7.6	267.8

	+	H.I.	-	
		275.24		
G				
4+25			7.2	268.0
+00			7.0	268.2
3+75			6.6	268.6
+50			6.9	268.3
+25			7.4	267.8
+00			7.7	267.5
2+75			8.6	266.6
+50			8.5	266.7
+43			8.9	266.3
+40			8.2	267.0
+25			7.4	267.8
+00			6.5	268.7
1+75			5.1	270.1
+50			4.7	270.5
+25			4.7	270.5
+23			5.3	270.9
+00			4.7	270.5
0+75			4.6	270.6
+50			4.6	270.6
G+07,0+75			5.0	270.2
+11,0+75			4.3	270.9
+10,0+50			4.0	271.2
G, 0+25			5.0	270.2



	+	H.I.	-
		275.24	
G			
0+00			5.90 269.3
G+25			
0+00			6.70 268.5
+25			6.0 269.2
+36			4.0 271.2
+50			4.2 271.0
+75			4.3 270.9
+83			4.5 270.7
+87			5.4 269.8
1+00			5.4 269.8
+25			5.5 269.7
+28			6.3 268.9
+30			5.4 269.8
+50			5.6 269.6
+75			5.9 269.3
2+00			6.8 268.4
+25			8.5 266.7
+40			8.8 266.4
+45			9.8 265.4
+50			9.6 265.6
+75			9.5 265.7
3+00			8.6 266.6
+25			

	+	H.I.	-
		275.24	
G+25			
3+50			8.6 266.6
+75			7.7 267.5
4+00			7.0 268.2
+25			6.9 268.3
+50			7.5 267.7
+75			7.7 267.8
5+00			8.3 266.9
+25			9.5 266.7
+50			10.0 265.2
+75			9.1 266.1
6+00			8.1 267.1
H			
6+00			8.0 267.2
5+75			8.5 266.7
+50			9.7 265.5
+25			11.5 263.7
+00			10.5 264.7
4+75			9.2 266.0
+50			8.5 266.7
+25			8.3 266.9
+00			7.8 267.4
3+75			7.9 267.3
+50			8.6 266.6

+ H.I. 275.24

H

3+25	9.3	265.9
+00	9.6	265.6
2+75	11.0	264.2
+50	10.3	264.9
+40	10.5	264.7
+35	9.5	265.7
+25	8.7	266.5
+00	7.6	267.6
1+75	6.9	268.3
+50	6.4	268.8
+42	6.4	268.8
+39	7.6	267.6
+36	6.9	268.3
+25	6.4	268.8
+09	7.3	267.9
+04	5.9	269.3
+00	5.8	269.4
0+90	5.5	269.7
+87	6.4	268.8
+75	6.3	268.9
+50	7.3	267.9
+25	6.4	268.8
+00	7.97	267.2

+ H.I. 275.24

H+25

0+00	8.82	266.4
+25	8.3	266.9
+30	9.0	266.2
+50	8.9	266.3
+75	8.0	267.2
+94	7.9	267.3
1+00	6.9	268.3
+13	7.0	268.2
+18	8.1	267.1
+25	7.4	267.8
+48	8.6	266.6
+50	9.0	266.2
+53	7.6	267.6
+75	7.9	267.3
2+00	8.5	266.7
+25	9.3	265.9
+36	9.9	265.3
+41	11.6	263.6
+50	11.3	263.9
+75	11.6	263.6
3+00	10.5	264.7
+25	9.8	265.4
+50	9.3	265.9

	+	H.I.	-	
		275.24		
H+25				
3+75			8.7	266.5
4+00			8.8	266.4
+25			9.2	266.0
+50			9.5	265.7
+75			10.4	264.8
5+00			11.1	264.1
+25			12.3	262.9
+50			10.8	264.4
+75			9.2	266.0
6+00			8.5	266.7
I				
6+00			9.0	266.2
5+75			9.7	265.5
+50			10.8	264.4
+25			13.4	261.8
+00			13.9	261.3
4+75			11.9	263.3
+50			10.2	265.0
+25			9.8	265.4
+00			9.6	265.6
3+75			9.7	265.5
+50			9.9	265.3
+25			10.2	265.0

	+	H.I.	-	
		275.24		
I				
3+00			11.1	264.1
2+75			12.8	262.4
+50			13.0	262.2
+36			12.7	262.5
+30			11.3	263.9
+25			11.0	264.2
+00			10.0	265.2
1+75			9.1	266.1
+72			11.0	264.2
+50			9.2	266.0
+34			9.4	265.8
+30			8.5	266.7
+25			8.3	266.9
+13			8.1	267.1
+08			9.1	266.1
+00			9.5	265.7
0+75			10.0	265.2
+50			10.8	264.4
+25			10.5	264.7
+20			9.0	265.2
+00			10.10	265.1
TR Rock I, 2+50	4.45	267.09	12.60	262.64

	+	H.L.	-
		267.09	
I+25			
0+00		2.42	264.7
+15		1.6	265.5
+25		3.6	263.5
+35		4.4	262.7
+50		4.0	263.1
+75		3.6	263.5
1+00		2.7	264.4
+25		2.4	264.7
+33		1.2	265.9
+50		1.7	265.4
+54		2.9	264.2
+75		2.8	264.3
2+00		4.2	262.9
I+14, 2+00		2.4	264.7
I+19, 2+00		4.6	262.5
I+25, 2+50		5.0	262.1
2+75		5.8	261.3
3+00		5.5	261.6
+25		4.7	262.4
+50		3.5	263.6
+75		2.8	264.3
4+00		2.9	264.2
+25		3.4	263.7

	+	H.L.	-
		267.09	
I+25			
4+50		4.2	262.9
+75		6.0	261.1
5+00		7.6	259.5
+25		5.4	261.7
+50		2.2	264.9
+75		1.4	265.7
6+00		1.1	266.0
J			
6+00		2.6	264.5
5+75		2.6	264.5
+50		3.6	263.5
+25		6.6	260.5
+00		9.0	258.1
4+75		9.1	258.0
+50		7.7	259.4
+25		6.5	260.6
+00		5.9	261.2
3+75		5.3	261.8
+50		5.0	262.1
+25		5.0	262.1
+10		5.2	261.9
+05		6.5	260.6
+00		6.6	260.5

+ H.I. 267.09

J

2+75	6.7	260.4
+50	6.9	260.2
+25	5.7	261.4
+00	5.5	261.6
1+96	6.0	261.1
+90	4.3	262.8
+75	3.6	263.5
+60	3.2	263.9
+50	4.0	263.1
+25	3.8	263.3
+00	4.3	262.8
0+75	5.0	262.1
+50	5.5	261.6
+25	6.4	260.7
+20	2.1	265.0
+00	2.90	264.2

J+25

0+00	3.33	263.8
+15	2.5	264.6
+25	7.8	259.3
+50	7.7	259.4
+75	6.4	260.7
1+00	5.3	261.8

+ H.I. 267.09

J+25

1+25	4.9	262.2
+50	5.4	261.7
+75	5.7	261.4
+87	6.1	261.0
+92	4.9	262.2
2+00	5.7	261.4
+13	6.0	261.1
+14	7.4	259.7
+25	7.7	259.4
+35	6.9	260.2
+50	7.4	259.7
+51	8.3	258.8
+53	7.7	259.4
+75	7.6	259.5
3+00	7.7	259.4
+05	7.4	259.7
+08	6.3	260.8
+25	6.1	261.0
+50	6.5	260.6
+75	6.8	260.3
4+00	7.6	259.5
+25	8.4	258.7
+50	9.7	257.4
+75	10.7	256.4
5+00	10.5	256.6

	+	H.I.	-	
		267.09		
J+25				
5+25			8.5	258.6
+50			6.0	261.1
+75			5.0	262.1
6+00			5.2	261.9
K				
6+00			8.2	258.9
5+75			8.2	258.9
+50			9.1	258.0
+25			10.8	256.3
+00			12.0	255.1
4+75			13.0	254.1
+50			12.0	255.1
+25			10.5	256.6
+00			9.3	257.8
3+75			8.9	258.2
+50			8.0	259.1
+25			7.6	259.5
+00			8.8	258.3
2+75			9.5	257.6
+68			10.1	257.0
+65			9.0	258.1
+50			8.7	258.4
+34			8.9	258.2

	+	H.I.	-	
		267.09		
K				
2+32			8.3	258.8
+25			8.6	258.5
+00			8.3	258.8
1+75			7.1	260.1
+50			6.5	260.6
+25			6.6	260.5
+00			7.8	259.3
0+75			10.2	256.9
+50			9.8	257.3
+25			10.5	256.6
+12			2.8	264.3
+00			3.65	263.5
K+25				
0+00			3.92	263.2
+13			3.4	263.7
+25			8.2	258.9
+50			11.7	255.4
+75			11.7	255.4
1+00			11.2	255.9
+15			9.0	258.1
+25			7.6	259.5
+50			8.0	259.1
+75			8.3	258.8

	+	H.I.	-	
		267.09		
K+25				
2+00			9.4	257.7
+25			10.0	257.1
+35			10.2	256.9
+38			11.0	256.1
+50			10.0	257.1
+75			10.6	256.5
+78			11.5	255.6
+90			11.0	256.1
3+00			9.1	258.0
+15			8.7	258.4
+20			7.8	259.3
+25			7.8	259.3
+50			8.6	258.5
+75			9.2	257.9
4+00			11.0	256.1
+25			12.4	254.7
+50			12.5	254.6
+75			14.5	252.6
5+00			14.2	252.9
+25			12.4	254.7
+50			11.4	255.7
+75			11.1	256.0
6+00			10.9	256.2

	+	H.I.	-	
		267.09		
L				
6+00			14.0	253.1
5+75			13.6	253.5
+50			14.0	253.1
+25			15.3	251.8
+00			16.6	250.5
4+75			15.3	251.8
+50			14.1	253.0
+25			12.5	254.6
+00			11.1	256.0
3+75			9.9	257.2
+50			9.5	257.6
+25			9.1	258.0
+12			10.6	256.5
+00			11.7	255.4
2+97			12.5	254.6
+85			12.0	255.1
+84			12.5	254.6
+82			11.9	255.2
+75			11.8	255.3
+50			11.3	255.8
+40			11.9	255.2
+38			10.6	256.5
+25			10.6	256.5

	+	H.I.	-
		267.09	
L			
2+00			10.8 256.3
1+75			10.1 257.0
+50			9.8 257.3
+25			10.5 256.6
+00			13.2 253.9
0+75			10.6 256.5
+50			9.4 257.7
+25			8.0 259.1
+12			4.0 263.1
+00			4.23 262.9
L+25			
0+00			4.55 262.6
+12			4.2 262.9
+25			7.5 259.6
+50			9.5 257.6
+75			11.0 256.1
1+00			13.5 253.6
+08			13.7 253.4
+12			12.4 254.7
+25			11.5 255.6
+50			11.2 255.9
+75			11.4 255.7
2+00			12.2 254.9

	+	H.I.	-
		267.09	
L+25			
2+25			12.1 255.0
+35			11.6 255.5
+40			13.0 254.1
+42			12.4 254.7
+50			12.4 254.7
+75			12.5 254.6
3+00			12.5 254.6
+25			11.5 255.6
+50			10.6 256.5
+75			10.7 256.4
4+00			12.3 254.8
+25			13.4 253.7
+50			14.6 252.5
+75			16.6 250.5
5+00			19.0 248.1
+05			21.0 246.1
+10			18.6 248.5
+25			17.7 249.4
+50			17.0 250.1
+75			17.2 249.9
6+00			17.0 250.1



	+	H.I.	-	
		267.09		
M				
6+00			19.9	247.2
5+75			19.4	247.7
+50			19.2	247.9
+25			20.2	246.9
+12			20.8	246.3
+08			22.0	245.1
+00			19.9	247.2
4+75			18.0	249.1
+50			17.1	250.0
+25			16.6	250.5
+00			15.6	251.5
3+75			14.3	252.8
+50			13.4	253.7
+25			13.1	254.0
+00			13.5	253.6
2+75			13.5	253.6
+50			13.3	253.8
+25			13.8	253.3
+00			13.8	253.3
1+75			12.9	254.2
+50			12.8	254.3
+25			13.4	253.7
+00			13.4	253.7

	+	H.I.	-	
		267.09		
M				
0+75			10.5	256.6
+50			9.3	257.8
+25			7.8	259.3
+00	Gutter		5.02	262.07
+00	Top of Curb		3.87	263.22
M+25				
0+00	Gutter		5.78	261.31
+00	Top of Curb		4.52	262.57
+05			5.0	262.1
+10			7.5	259.6
+25			8.3	258.8
+50			9.9	257.2
+75			11.1	256.0
1+00			12.7	254.4
+25			14.0	253.1
+50			13.9	253.2
+75			14.1	253.0
2+00			15.8	251.3
+25			14.6	252.5
+50			13.7	253.4
+75			14.3	252.8
3+00			14.6	252.5
+25			15.0	252.1

	+	H.L.	-	
		267.09		
M+25				
3+50			16.1	251.0
+75			17.1	250.0
4+00			18.3	248.8
+25			18.9	248.2
+50			19.6	247.5
+75			20.4	246.7
5+00			21.6	245.5
+13			25.2	241.9
+25			23.0	244.1
+50			22.8	244.3
+75			23.0	244.1
6+00			23.6	243.5
N				
6+00			30.4	236.7
5+75			28.2	238.9
+50			28.0	239.1
M+40, 5+50			24.9	242.2
N, 5+25			27.9	239.2
5+00			26.8	240.3
M+38, 5+00			22.8	244.3
N, 4+75			25.2	241.9
M+43, 4+75			22.8	244.3
N, 4+50			22.7	244.4

	+	H.L.	-	
		267.09		
N				
4+25			22.0	245.1
+00			21.5	245.6
3+75			20.7	246.4
+50			19.5	247.6
+28			18.3	248.8
+25			16.8	250.3
+20			14.6	252.5
+00			14.9	252.2
2+75			14.6	252.5
+68			14.6	252.5
+60			20.1	247.0
+50			17.1	250.0
M+35, 2+50			20.0	247.1
M+30, 2+50			15.3	251.8
N, 2+25			18.0	249.1
2+13			19.0	248.1
+00			17.3	249.8
1+75			16.0	251.1
+50			14.5	252.6
+25			13.8	253.3
+00			13.4	253.7
0+75			12.6	254.5
+50			11.4	255.7

+ H.I. -  
267.09

N

0+25		10.9	256.2
+19	Toe Concrete spillway	9.31	257.78
+00	Lip of Spillway	6.09	261.0

Details of Spillway

East Side N+4.3. West Side M+34.3

Lip = 0+00 Toe = 0+19

West End of Curb along 0+00 = L+29.3

L+29.3		267.09	
0+00	Gutter	4.62	262.47
+00	Top of Curb	3.48	263.61

East End of Curb along 0+00 = M+34.3

M+34.3		267.09	
0+00	Gutter	5.99	261.10
+00	Top of Curb	4.73	262.36
Fr. Stone	8.85	275.72	0.22
N.W. B.P.			266.87
Arizona & Hpas		5.75	269.97
			269.95

20

Trees

- #1 N.W. Cor. B.L., 1+00, south to B.L., 2+40, East to A+15, 2+55, East to C, 2+45, North to C+38, 1+50, North to D+30, 1+10, West to C+25, 0+65 West to B.L., 1+00.
- #2 Group of four trees centered at B+15, 2+75 10' Radius.
- #3 N.W. Cor. D+40, 1+88, South to D+22, 2+30, East to F, 2+40, East to G+35, 2+30, East to I+08, 2+00, North to I, 1+85, West to H+10, 1+60, West to D+40, 1+88.
- #4 scrub oaks centered at F+35, 1+50. 20' Radius.
- #5 " " " " G+30, 0+60. 15' "
- #6 N.W. Cor. I+40, 0+50, South to I+20, 0+95, South to I+25, 1+25, East to K+35, 2+25, North to M, 1+60, North to M, 1+40, West to K+12, 1+15, North to J+25, 0+60, West to I+40, 0+50.
- #7 N.W. Cor. L+12, 0+60, East to M+25, 0+85, North to M+25, 0+65, West to L+12, 0+60.
- #8 Lone Euca. 2'dia. M+40, 2+00.
- #9 Two trees M+20, 3+23 & M+30, 3+26

## Trenches

- #1 2.5' trench 0.7' deep. B.L. 4+80 to B.L. +10, 4+70 to B.L. +27, 4+87 to A, 4+75 to A+15, 4+80 to A+35, 4+70 to A+25, 4+35 to B.L. +35, 4+35 to B.L. +13, 4+50 to B.L. 4+40
- #2 A+25, 4+35 to A+25, 4+25 to A+10, 3+75 to B, 3+70 to B+35, 3+95 to B+10, 4+25 to B, 4+10 to A+25, 4+25.
- #3 B+35, 3+95 to B+45, 4+55 to B+10, 4+25
- #4 B+45, 4+55 to C+05, 5+20 to B+35, 5+30 to B+25, 5+20 to B+05, 5+30 to B+30, 5+60.
- #5 B+05, 5+30 to B, 5+40 to A+30, 5+25 to A+42, 5+65 to A+35, 4+70
- #6 C+05, 5+20 to C+20, 5+55 to C+25, 5+85 to C+38, 5+97.
- #7 4' Trench, 2' deep. G+15, 5+05 to G+25, 5+40.
- #8 2.5' " 1' deep. J+35, 5+00 to J+40, 4+65 to K+40, 4+20 to L+37, 3+37.

3-17-'32

Shoemaker  
Updegraff  
Woods

8-18-'34

Irebert  
Kanagy T  
Bell  
Keyser

21

Cross Section of Section "II" (Texas St. Base  
Line to 700' East & 600' to 1200' South of 0+00)

See P. 73 for H.I. of 8-18-34

offset hub	+	H.I.	-		
B.L. 5+92	4.20	279.43	8-18-34	278.24	8-18-34
B.L. +25					
6+25			3.5	278.9	
+50			3.8	278.6	
+75			3.9	278.5	
7+00			4.4	278.0	
+25			4.6	277.8	
+50			4.7	277.7	
+75	✓	8-18-34	2.4	4.9	277.7
8+00	Sta.	8-18-34	2.5	4.8	277.6
+25	8+66	275.8	2.5	5.2	277.2
+50	8+54	277.7	1.5	5.9	276.5
+75	8+50	277.9	4.1	6.3	276.1
9+00	8+40	277.9	3.8	6.8	275.6
+25	8+37	276.8	4.3	6.7	275.7
+50			4.6	7.5	274.9
+75			5.2	7.7	274.7
10+00			5.9	7.9	274.5
+25			6.0	8.1	274.3
+50			6.2	8.9	273.5
+75			6.6	9.5	272.9

Shoemaker  
Updegraf  
Woods

8-18-34

22

+ H.I. -  
279.43 → 8-18-34  
282.44 8-18-34

B.L. +25

11+00	8-18-34 → 7.4	10.0	272.4	272.0
+25	8.0	10.5	271.9	271.4
+50	6.5	11.2	271.2	270.9
+75	8.7	11.6	270.8	270.7
12+00	8.7	11.7	270.7	270.7

A

12+00	10.0	13.0	269.4	269.4	
11+75	10.1	13.0	269.4	269.3	
+50	9.7	12.6	269.8	269.7	
+25	9.2	12.2	270.2	270.2	
11+00	8.7	11.8	270.6	270.7	
10+75	8.8	11.4	271.0	270.6	
+50	9.3	10.8	271.6	270.1	
+25	7.9	10.3	272.1	271.5	
+00	8.1	9.9	272.5	271.3	
9+75	6.7	9.1	273.3	272.7	
+50	5.8	8.5	273.9	273.6	
+25	5.8	8.0	274.4	273.6	
+00	4.8	7.3	275.1	274.6	
8+75	8-18-34 STA. ELEV.	4.0	6.5	275.9	275.4
+50	8+37 276.8	1.8	5.4	277.0	277.6
+25	8+40 277.8	2.6	4.7	277.7	276.8
8+00	8+60 276.5	2.4	4.1	278.3	277.0

+ H.I. -  
279.43  
282.44

A

7+75	2.2	3.8	278.6	277.2	
+50		3.8	278.6		
+25		3.5	278.9		
+00		3.1	279.3		
6+75		3.0	279.4		
+50		2.9	279.5		
+25		2.5	279.9		
A+25					
6+25		1.7	280.7		
+50		2.1	280.3		
+75		2.5	279.9		
7+00		2.6	279.8		
+25		3.0	279.4		
+50		3.3	279.1		
+75		3.5	278.9	277.5	
8+00	8-18-34 STA. ELEV.	2.1	4.1	278.3	277.3
+25	8+36 277.0	2.6	4.7	277.7	276.8
+50	8+38 277.7	1.6	5.4	277.0	277.8
+75	8+66 275.6	3.9	6.3	276.1	275.5
9+00	48' East of A 7+75 = 278.4	4.9	7.2	275.2	274.5
+25		5.7	8.4	274.0	273.7
+50		6.5	9.4	273.0	272.9
+75		7.5	10.5	271.9	271.9

Shoemaker 8-18-34  
Updegraf  
Woods

23

+ H.I. 279.43 → 8-18-34 8-18-34  
282.44

A+25				
	8.4			
10+00	11.2	271.2	271.0	
+25	9.5	12.0	270.4	269.9
+50	9.7	12.3	270.1	269.7
+75	9.9	12.7	269.7	269.5
11+00	10.1	12.9	269.5	269.3
+25	10.3	13.0	269.4	269.1
+50	10.3	13.3	269.1	269.1
+75	10.8	13.7	268.7	268.6
12+00	10.9	13.7	268.7	268.5

B				
12+00	11.2	14.2	268.2	268.2
11+75	11.4	14.5	267.9	268.0
+50	11.3	14.2	268.2	268.1
+25	11.0	14.0	268.4	268.4
+00	10.9	13.9	268.5	268.5
10+75	10.3	13.4	269.0	269.1
+50	10.1	13.1	269.3	269.3
+25	9.6	12.5	269.9	269.8
+00	9.3	12.0	270.4	270.1
9+75	8.4	11.1	271.3	271.0
+50	7.6	9.9	272.5	271.8
+25	6.7	9.0	273.4	272.7
9+00	5.7	8.2	274.2	273.7

+ H.I. 279.43  
282.44

B				8-18-34
8+75	5.2	7.2	275.2	274.2
+50		6.2	276.2	
+25		5.2	277.2	
7+75	0.6	4.4	278.0	278.8
+50		3.7	278.7	
+25		3.4	279.0	
+00		3.1	279.3	
6+75		2.6	279.8	
+50		2.0	280.4	
+25		1.6	280.8	

B+25				
6+25		1.2	281.2	
+50		2.0	280.4	
+75		2.8	279.6	
7+00		3.6	278.8	
+25		4.4	278.0	
+50		4.8	277.6	
+75		5.0	277.4	
8+00		5.5	276.9	
+25		6.2	276.2	
+50		7.2	275.2	
+75	5.9	8.0	274.4	273.5
9+00	6.6	9.1	273.3	272.8

274.15  
 .78  
 274.93

+

H.I.  
 279.43 - 8-18-34  
 282.44

8-18-34

B+25

9+25	7.7	10.0	272.4	271.7
+50	8.6	10.9	271.5	270.8
+75	9.1	11.7	270.7	270.3
10+00	9.4	12.2	270.2	270.0
+25	9.9	12.8	269.6	269.5
+50	10.5	13.2	269.2	268.9
+75	10.6	13.7	268.7	268.8
11+00	11.1	14.1	268.3	268.3
+25	11.5	14.6	267.8	267.9
+50	11.7	14.5	267.9	267.7
+75	11.8	14.8	267.6	267.6
12+00	11.5	14.5	267.9	267.9

C

12+00	11.4	14.3	268.1	268.0
11+75	12.2	15.1	267.3	267.2
+50	12.2	15.3	267.1	267.2
+25	11.4	14.2	268.2	268.0
+00	11.1	13.8	268.6	268.3
10+75	10.8	13.3	269.1	268.6
+50	10.0	12.9	269.5	269.4
+25	9.4	12.4	270.0	270.0
+00	9.0	12.0	270.4	270.4
9+75	8.7	11.8	270.6	270.7

Shoemaker 8-18-34  
 Updegraf 8-20-34  
 Woods

24

+

H.I.  
 279.43 - 8-18-34  
 282.44

C

8-18-34

9+50	8.3	11.3	271.1	271.1
+25	8.0	10.8	271.6	271.4
9+00	7.2	9.9	272.5	272.2
8+75	6.2	9.1	273.3	273.2
+50		8.1	274.3	
+25		7.3	275.1	
+00		6.7	275.7	
7+75		6.8	275.6	
+50		6.4	276.0	
+25		5.5	276.9	
+00		4.0	278.4	
6+75		2.9	279.5	
+50		2.2	280.2	
+25		1.6	280.8	
C+25				
6+25		2.6	279.8	
+50		3.4	279.0	
+75		4.5	277.9	
7+00		5.5	276.9	
+25		6.8	275.6	
+50		7.8	274.6	
+75		8.2	274.2	
8+00		8.1	274.3	

See page 73 for H.I.

Shoemaker 8-20-34  
Updegraf  
Woods.

0.5 lower on Av  
than original  
H.E.B.

25

+ H.I. -  
274.93 → 8-20-34  
282.44

8-20-34

+ H.I. -  
274.93 → 8-20-34  
282.44

8-20-34

C+25

II

8+25	8.1	274.3	
+50	8.4	274.0	
+75	<sup>2.0</sup> 9.1	273.3	272.9
9+00	<sup>2.9</sup> 9.8	272.6	272.0
+25	<sup>3.2</sup> 10.5	271.9	271.7
+50	<sup>3.9</sup> 11.0	271.4	271.0
+75	<sup>4.5</sup> 11.6	270.8	270.4
10+00	<sup>5.2</sup> 11.9	270.5	269.7
+25	<sup>5.5</sup> 12.5	269.9	269.4
+50	<sup>6.5</sup> 12.9	269.5	268.4
+75	<sup>6.7</sup> 13.6	268.8	268.2
11+00	<sup>8.0</sup> 14.3	268.1	266.9
+25	<sup>8.5</sup> 14.8	267.6	266.4
+50	<sup>9.0</sup> 15.7	266.7	265.9
+75	<sup>8.3</sup> 15.6	266.8	266.6
12+00	<sup>7.5</sup> 15.0	267.4	267.4
II			
12+00	<sup>9.9</sup> 16.8	265.6	265.0
11+75	<sup>10.1</sup> 16.8	265.6	264.8
+50	<sup>9.2</sup> 16.5	265.9	265.7
+25	<sup>8.6</sup> 16.1	266.3	266.3
+00	<sup>7.6</sup> 15.0	267.4	267.3
10+75	<sup>7.0</sup> 14.3	268.1	267.9

10+50	6.6	13.4	269.0	268.3
+25	6.2	13.0	269.4	268.7
+00	5.6	12.4	270.0	269.3
9+75	5.0	12.0	270.4	269.9
+50	3.8	11.0	271.4	271.1
+25	3.3	10.4	272.0	271.6
+00	2.9	9.8	272.6	272.0
8+75	2.6	9.5	272.9	272.3
+50		9.1	273.3	
+25		9.2	273.2	
+00		9.3	273.1	
7+75		9.8	272.6	
+50		9.3	273.1	
+25		8.9	273.5	
+00		8.0	274.4	
6+75		6.7	275.7	
+50		5.6	276.8	
+25		4.4	278.0	
II+25				
6+25		7.4	275.0	
+50		8.5	273.9	
+75		9.2	273.2	
7+00		10.1	272.3	



	+	H.I.	-
		282.44	
II+25			
7+25		10.8	271.6
+50		10.9	271.7
+75		10.6	271.8
8+00		10.2	272.2
+25		9.5	272.9
+50		9.5	272.9
+75		9.7	272.7
9+00		10.1	272.3
+25		10.4	272.0
+50		10.9	271.5
+75		11.8	270.6
10+00		12.5	269.9
+25		13.1	269.3
+50		13.5	268.9
+75		13.7	268.7
11+00		13.7	268.7
+25		14.8	267.6
+50		15.3	267.1
+75		16.2	266.2
12+00		17.5	264.9
E			
12+00		16.1	266.3
11+75		14.9	267.7

	+	H.I.	-
		282.44	
E			
11+50		13.7	268.7
+25		13.1	269.3
+00		12.8	269.6
10+75		12.3	270.1
+50		12.2	270.2
+25		12.1	270.3
+00		11.9	270.5
9+75		11.2	271.2
+50		10.6	271.8
+25		10.2	272.2
+00		9.8	272.6
8+75		9.5	272.9
+50		9.5	272.9
+25		10.2	272.2
+00		10.8	271.6
7+75		10.9	271.5
+50		11.6	270.8
+25		12.0	270.4
+00		11.9	270.5
6+75		11.4	271.0
+50		11.1	271.3
+25		10.7	271.7

	+	H.I.	-	
		282.44		
E+25				
6+25			12.6	269.8
+50			12.7	269.7
+75			12.9	269.5
7+00			13.2	269.2
+25			13.0	269.4
+50			12.5	269.9
+75			11.8	270.6
8+00			10.9	271.5
+25			10.2	272.2
+50			9.9	272.5
+75			9.8	272.6
9+00			9.8	272.6
+25			10.0	272.4
+50			10.2	272.2
+75			10.4	272.0
10+00			10.5	271.9
+25			10.9	271.5
+50			11.1	271.3
+75			11.3	271.1
11+00			11.9	270.5
+25			12.4	270.0
+50			12.8	269.6
+75			13.7	268.7
12+00			15.0	267.4

	+	H.I.	-	
		282.44		
W. Rock Ft 15, 10+90	2.09	274.10	10.41	272.03
F				
12+00			5.3	268.8
11+75			4.2	269.9
+50			3.4	270.7
+25			3.0	271.1
+00			2.5	271.6
10+75			2.3	271.8
+50			2.0	272.1
+25			1.8	272.3
+00			1.7	272.4
9+75			1.7	272.4
+50			1.8	272.3
+25			1.9	272.2
+00			2.0	272.1
8+75			2.1	272.0
+50			2.0	272.1
+25			2.4	271.7
+00			2.9	271.2
7+75			4.1	270.0
+50			4.6	269.5
+25			5.3	268.8
+00			5.9	268.5
6+75			5.9	268.5

+	H.I.	-
	274.10	

F	+	H.I.	-
6+50		5.8	268.3
+25		6.1	268.0
F +25			
6+25		6.2	267.9
+50		6.3	267.8
+75		6.6	267.5
7+00		5.9	268.2
+25		5.8	268.3
+50		5.8	268.3
+75		5.6	268.5
8+00		4.7	269.4
+25		4.2	269.9
+50		3.0	271.1
+75		2.8	271.3
9+00		3.0	271.1
+25		3.2	270.9
+50		3.2	270.9
+75		2.6	271.5
10+00		2.2	271.9
+25		1.8	272.3
+50		1.6	272.5
+75		1.5	272.6

+	H.I.	-
	274.10	

G	+	H.I.	-
11+00		1.7	272.4
+25		2.0	272.1
+50		2.3	271.8
+75		3.1	271.0
12+00		4.3	269.8
12+00		4.0	270.1
11+75		2.7	271.4
+50		2.4	271.7
+25		2.0	272.1
+00		1.6	272.5
10+75		1.5	272.6
+50		1.4	272.7
+25		2.0	272.1
+00		2.4	271.7
9+75		3.2	270.9
+50		3.6	270.5
+25		4.2	269.9
+00		4.6	269.5
8+75		4.5	269.6
+50		5.3	268.8
+25		5.4	268.7
+00		4.7	269.4

+ H.I. 274.10 -

G

7+75	5.7	268.4
+50	6.2	267.9
+25	6.4	267.7
+00	6.4	267.7
6+75	6.6	267.5
+50	7.0	267.1
+25	7.1	267.0

G+25

6+25	7.0	267.1
+50	6.9	267.2
+75	6.7	267.4
7+00	6.4	267.7
+25	6.2	267.9
+50	5.9	268.2
+75	5.6	268.5
8+00	5.7	268.4
+25	6.2	267.9
+50	6.8	267.3
+75	7.5	266.6
9+00	6.8	267.3
+25	6.3	267.8
+50	5.3	268.8
+75	4.3	269.8

+ H.I. 274.10 -

G+25

10+00	3.0	271.1
+25	1.9	272.2
+50	1.5	272.6
+75	1.4	272.7
11+00	1.3	272.8
+25	1.8	272.3
+50	2.3	271.8
+75	3.4	270.7
12+00	4.3	269.8

H

12+00	3.7	270.4
11+75	2.8	271.3
+50	2.2	271.9
+25	1.6	272.5
+00	1.5	272.6
10+75	1.2	272.9
+50	1.9	272.2
+25	2.8	271.3
+00	3.6	270.5
9+75	5.2	268.9
+50	6.6	267.5
+25	8.1	266.0
+00	8.8	265.3

	+	H.I.	-
		274.10	
H			
8+75		8.8	265.3
+50		8.0	266.1
+25		7.3	266.8
+00		6.9	267.2
7+75		6.5	267.6
+50		6.4	267.7
+25		6.0	268.1
+00		6.1	268.0
6+75		6.6	267.5
+50		6.4	267.7
+25		6.2	267.9
H+25			
6+25		7.0	267.1
+50		6.7	267.4
+75		6.5	267.6
7+00		6.5	267.6
+25		6.2	267.9
+50		7.0	267.1
+75		7.3	266.8
8+00		8.1	266.0
+25		8.4	265.7
+50		8.9	265.2
+75		10.3	263.8

	+	H.I.	-
		274.10	
H+25			
9+00		10.9	263.2
+25		9.6	263.5
+50		8.2	265.9
+75		6.3	267.8
10+00		5.3	268.8
+25		4.2	269.9
+50		3.4	270.7
+75		2.4	271.7
11+00		2.0	272.1
+25		2.2	271.9
+50		2.6	271.5
+75		3.0	271.1
12+00		3.9	270.2
I			
12+00		4.4	269.7
11+75		3.4	270.7
+50		3.4	270.7
+25		3.4	270.7
+00		3.9	270.2
10+75		4.5	269.6
+50		4.8	269.3
+25		5.8	268.3
+00		6.7	267.4

	+	H.I.	-
		274.10	

I

9+75		9.6	264.5
+50		10.6	263.5
+25		12.1	262.0
+00		12.5	261.6
8+75		11.9	262.2
+50		10.7	263.4
+25		10.0	264.1
+00		8.9	265.2
7+75		8.3	265.8
+50		8.2	265.9
+25		7.6	266.5
+00		7.6	266.5
6+75		7.9	266.2
+50		8.2	265.9
+25		8.0	266.1

I+25

6+25		8.6	265.5
+50		8.7	265.4
+75		8.9	265.2
7+00		8.7	265.4
+25		8.8	265.3
+50		9.2	264.9
+75		9.2	264.9

	+	H.I.	-
		274.10	

I+25

8+00		10.1	264.0
+25		10.7	263.4
+50		12.0	262.1
+75		13.3	260.8
9+00		14.3	259.8
+25		13.4	260.7
+50		12.2	261.9
+75		10.4	263.7
10+00		9.2	264.9
+25		7.8	266.3
+50		7.1	267.0
+75		6.1	268.0
11+00		5.8	268.3
+25		5.1	269.0
+50		4.9	269.2
+75		5.1	269.0

J

11+50		7.3	266.8
+25		7.5	266.6
+00		8.0	266.1
10+75		9.0	265.1
+50		9.7	264.4
+25		10.5	263.6

	+	H.I.	-	
		274.10		
J				
10+00		11.5	262.6	
9+75		13.2	260.9	
+50		15.1	259.0	
+25		16.1	258.0	
+00		15.8	258.3	
8+75		14.5	259.6	
+50		12.9	261.2	
+25		11.5	262.6	
+00		10.9	263.2	
7+75		10.3	263.8	
+50		10.1	264.0	
+25		10.1	264.0	
+00		10.3	263.8	
6+75		10.2	263.9	
+50		10.2	263.9	
+25		10.0	264.1	
J+25				
6+25		13.0	261.1	
+50		12.9	261.2	
+75		12.3	261.8	
7+00		12.3	261.8	
+25		12.2	261.9	
+50		12.2	261.9	

	+	H.I.	-	
		274.10		
J+25				
7+75		12.0	262.1	
8+00		11.9	262.2	
+25		12.6	261.5	
P. Rock J, 8+42	2.48	264.07	12.51	261.59
J+25				
8+50		4.4	259.7	
+75		6.0	258.1	
9+00		7.3	256.8	
+25		7.5	256.6	
+50		6.5	257.6	
+75		3.9	260.2	
10+00		3.0	261.1	
+25		1.8	262.3	
+50		1.6	262.5	
+75		1.1	263.0	
K				
10+50		3.2	260.9	
+25		3.6	260.5	
+00		3.9	260.2	
9+75		5.9	258.2	
+50		8.5	255.6	
+25		9.6	254.5	
+00		9.6	254.5	

	+	H.L.	-
		264.07	

K

8+75	8.6	255.5
+50	7.5	256.6
+25	5.8	258.3
+00	5.0	259.1
7+75	5.1	259.0
+50	5.0	259.1
+25	5.3	258.8
+00	5.2	258.9
6+75	5.7	258.4
+50	6.2	257.9
+25	5.8	258.3

K+25

6+25	8.8	255.3
+50	8.7	255.4
+75	8.0	256.1
7+00	8.5	255.6
+25	8.4	255.7
+50	8.3	255.8
+75	8.0	256.1
8+00	8.7	255.4
+25	8.9	255.2
+50	10.2	253.9
+75	10.9	253.2

	+	H.L.	-
		264.07	

K+25

9+00	11.8	252.3
+25	10.9	253.2
+50	9.7	254.4
+75	8.8	255.3
10+00	6.5	257.6

L

10+00	9.0	255.1
9+75	11.6	252.5
+50	13.1	251.0
+25	13.5	250.6
+00	14.3	249.8
8+75	13.6	250.5
+50	12.6	251.5
+25	11.6	252.5
+00	11.1	253.0
7+75	11.1	253.0
+50	11.2	252.9
+25	11.7	252.4
+00	11.8	252.3
6+75	12.4	251.7
+50	12.6	251.5
+25	11.8	252.3
+00	11.0	253.1



Trenches.

#1 4' Trench, 1' deep. G+08, 8+55  
to G+20, 9+45.

Indexed  
c.s.k.

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Survey

of

Sewer Line

Field House to Florida St. Canyon

Recreation Area

N.E. Corner Balboa Park

3-24-32

Drebert, Chief

Bell      \*

Kanagy    Ch.

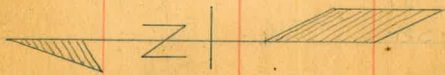
Keyser    Ch.

Header Board = 0+00

# Sewer Survey

Drebert, Chief  
Bell  
Kamagy  
Keyset

For Construction Notes  
See F.B. 1441-58



N 1° E Texas St. Base Line

500'

N 89° W  
4+65

20° 35'

2+33.55  
P.O.T.  
3+14.43  
4 L

N 17° E  
46° 32'

3+0.32

0+L R  
6+24.75

N 24° E  
37° 11'  
3+23.55  
1+46.3

0+L R  
9+47.30

7° 50'

N 1° 30' E  
2+32.10

0+L R  
12+40.00

N 63° 09' E  
43° 59'

0+L R  
12+40.00

487.51

0+L R  
17+27.51

N 25° 30' E

0+L R  
17+27.51

31° 28'

N 53° 30' E

3+14.97

59° 45'

0+L R  
20+62.00

190.02

N 57° 45' E

Florida St Canyon Sewer

N 3° W

M.H.

181.70'

M.H.

0+L R  
20+62.00

End

3-24-32

Irebert  
Bell  
Kanagy  
Keyser

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Angle Point	Hor. Distance	Station	Mag. Bearing	Angle Right	Angle Left	Description
			N 89° W			
1		0 + 00			20° 33'	15' South of Field House and 500' South of 0 + 00 (header board
	314.43		N 70° E			40' South of North Line of Wpas); and 15' West of
2		3 + 14.43			46° 32'	Texas St. Base Line.
	310.32		N 24° E			
3		6 + 24.75		37° 41'		Bottom of Canyon
	322.55		N 61° 30' E			
4		9 + 47.30		7° 50'		" " "
	292.70		N 69° 30' E			
5		12 + 40.00			43° 59'	" " "
	487.51		N 25° 30' E			
6		17 + 27.51		31° 28'		" " "
	334.49		N 56° 45' E			
7		20 + 62.00			59° 48'	On E. of Florida St. Canyon Main
			N 3° W			

3-25-32

Drebert  
Bell  
Kanagy  
Keyser

± Profile of Sewer Line from Field House to  
Florida St. Canyon Main.

	+	H.I.	-	
1' offset hub B.L. 5+92	1.49	279.73		278.24
0+00	Hub		1.34	278.4
+25			1.7	278.0
+50			3.8	275.9
+75			5.0	274.7
1+00			6.0	273.7
+25			6.2	273.5
+50			7.4	272.3
+75			8.8	270.9
2+00			10.0	269.7
+25			10.7	269.0
+33.55	P.O.T. hub.		11.19	268.5
+40			12.1	267.6
TP #1 <sup>(Rock opp 3+90)</sup>	0.35	267.29	12.79	266.94
2+48			2.6	264.7
+50			2.7	264.6
+75			5.0	262.3
+80			6.3	261.0
+85			8.8	258.5
+97			9.5	257.8
+98			12.0	255.3

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	+	H.I.	-	
		267.29		
3+00			12.0	255.3
+06			11.6	255.7
+08			9.9	257.6
3+14.43	Hub		8.53	258.8
+19			9.2	258.1
TP #2 <sup>(Rock in Gully Opp. 3+14.43)</sup>	0.51	254.86	12.94	254.35
3+25			1.3	253.6
+50			3.5	251.4
+71			5.2	249.7
+72			3.9	251.0
+75			3.8	251.1
4+00			6.4	248.5
+20			7.8	247.1
+25			8.9	246.0
+29			10.0	244.9
+40			11.7	243.2
+50			11.5	243.4
+53			11.1	243.8
+75			12.2	242.7
TP #3 <sup>(Lath on E at 4+83)</sup>	0.00	242.10	12.76	242.10
5+00			2.4	239.7
+05			3.3	238.8
+06			4.5	237.6
+25			5.5	236.6

	+	H.I.	-	
		242.10		
5+40			6.4	235.7
+43			5.7	236.4
+50			5.5	236.6
+75			6.4	235.7
6+00			8.6	233.5
+09			10.2	231.9
+13			12.1	230.0
+15			11.9	230.2
TP #4 { Hub at 6+24.75	1.10	235.54 ✓	7.66	234.44 ✓
6+50			3.8	231.7
+63			5.3	230.2
+75			6.7	228.8
+83			8.8	226.7
7+00			9.8	225.7
+09			10.5	225.0
+10			8.9	226.6
+16			7.6	227.9
+25			6.8	228.7
+35			6.7	228.8
+50			8.3	227.2
+75			11.4	224.1
8+00			13.4	222.1
03			12.9	222.6
05			11.2	224.3

	+	H.I.	-	
		235.54		
8+25			12.3	223.2
TP #5 { Lath on E at 8+30	0.87	223.41 ✓	13.00	222.54 ✓
8+50			3.1	220.3
+67			5.5	217.9
+70			7.0	216.4
+75			6.8	216.6
9+00			8.4	215.0
+01			7.9	215.5
+02			6.9	216.5
+08			5.9	217.5
+25			5.9	217.5
+41			9.0	214.4
+47.30 Hub			10.09	213.3
+50			10.5	212.9
+67			12.8	210.6
+75			12.3	211.1
TP #6 { Lath on E at 9+89	1.54	212.48 ✓	12.47	210.94 ✓
10+00			2.8	209.7
+07			3.6	208.9
+10			4.4	208.1
+15			4.8	207.7
+20			4.0	208.5
+25			4.1	208.4
+50			5.0	207.5

	+	H.I.	-	
		212.48		
10+75			6.1	206.4
+83			7.4	205.1
+95			7.9	204.6
11+00			6.9	205.6
+25			7.6	204.9
+35			8.8	203.7
+38			10.0	202.5
+40			10.6	201.9
+46			9.4	203.1
+50			9.1	203.4
+56			7.8	204.7
+75			7.4	205.1
12+00			8.9	203.6
+25			11.4	201.1
TP*7 <sup>Hub at</sup> 12+40.00	0.82	201.02	12.28	200.20
12+48			2.9	198.1
+50			4.5	196.5
+55			4.6	196.4
+56			2.9	198.1
+67			3.6	197.4
+68			5.3	195.7
+75			5.4	195.6
+77			4.1	196.9
13+00			3.0	198.0

	+	H.I.	-	
		201.02		
13+25			5.1	195.9
+48			7.5	193.5
+50			9.2	191.8
+55			9.6	191.4
+56			7.8	193.2
+75			8.0	193.0
14+00			9.3	191.7
+25			10.9	190.1
+32			11.5	189.5
+33			12.7	188.3
+39			12.7	188.3
+40			11.5	189.5
+50			10.6	190.4
+75			11.1	189.9
15+00			12.3	188.7
TP*8 <sup>Lath on E</sup> lat 15+15	2.78	190.95	12.85	188.17
15+25			4.0	187.0
+45			7.0	184.0
+47			8.1	182.9
+49			8.0	183.0
+50			7.0	184.0
+75			7.4	183.6
+95			9.0	182.0
+97			10.1	180.9

	+	H.I.	-	
		190.95		
16+00			9.3	181.7
+07			6.6	184.4
+25			7.3	183.7
+50			10.0	181.0
+67			12.6	178.4
TP*9 <sup>Loth on #</sup> <sub>Lot 16+65</sub>	2.54	181.22	12.27	178.68 ✓
16+68			4.2	177.0
+73			4.5	176.7
+75			3.5	177.7
+82			3.0	178.2
+98			4.8	176.4
17+00			5.9	175.3
+01			6.4	174.8
+06			6.4	174.8
+10			5.0	176.2
+20			4.5	176.7
+25			5.0	176.2
+29.51 Hub			5.17	176.0
+40			7.2	174.0
+43			8.4	172.8
+46			8.6	172.6
+47			7.1	174.1
+50			6.8	174.4
+59			5.2	176.0

	+	H.I.	-	
		181.22		
17+75			6.4	174.8
18+00			10.0	171.2
+04			10.3	170.9
+10			11.6	169.6
+22			12.3	168.9
+25			11.3	169.9
+29			11.5	169.7
+30			13.2	168.0
+50			13.6	167.6
+60			14.1	167.1
+61			12.6	168.6
+75			11.3	169.9
19+00			12.0	169.2
+25			13.8	167.4
TP*10 <sup>Loth &amp; No.</sup> <sub>Lot 19+10</sub>	0.18	168.52 ✓	12.88	168.34 ✓
19+37			1.7	166.8
+42			2.6	165.9
+50			2.5	166.0
+67			3.4	165.1
+70			4.4	164.1
+75			4.7	163.8
+95			6.2	162.3
+96 3' H <sub>2</sub> O Pipe			5.63	162.89
20+00			5.7	162.8

	+	H.I.	-	
		168.52		
20+17			6.5	162.0
+25			7.3	161.2
+36			7.6	160.9
+40			8.0	160.5
+45			8.6	159.9
+50			8.3	160.2
+51			7.1	161.4
TP #11	+62.00	Hub (End of Line)	7.99	160.53 ✓
TP #12	{ Lath 65' N. of 20+00	3.00	167.28 ✓	4.24 164.28 ✓
	Flow Line of M.H. 181.70' N. of 20+62		9.45	157.83 ✓
TP #11	1.67	162.20 ✓	6.75	160.53 ✓
	Flow Line of M.H. 190.02' So. of 20+62		10.80	151.40 ✓
TP #13	Rock in road	2.49	163.97 ✓	0.72 161.48 ✓
TP #14	"	0.23	155.41 ✓	8.79 155.18 ✓
TP #15	Rock	2.89	150.05 ✓	8.25 147.16 ✓
TP #16	Rock in Bridal Path	6.82	146.72 ✓	10.15 139.90 ✓
TP #17	{ Lath 10' E of 16+12	9.62	148.68 ✓	7.66 139.06 ✓
B.M. 15+56	Hub		0.33	148.35 ✓ 148.51
B.M. 39+50	Hub		16.70	131.98 ✓ 131.92

Approximately opposite 17+50 on "A" Line. Book #1355

Laurel St. Extension 16+12

P.C. on Laurel St. Extension. Book #1397 Page 77 (Walker)

& Hub on "A" Line. Book #1355 Page 64 (Sisson)

Notes- Total distance between M.H.'s =  $190.02 + 181.72 = 371.72'$

Difference in Elev. of Flow Lines =  $157.83 - 151.40 = 6.43'$

Rate of Grade =  $0.0173'$  per foot

Elev. of flow line at 20+62 =  $151.40 + (190.02 \times 0.0173) = 151.40 + 3.29 = 154.69'$

See B20/17



3-30-32

Drebert  
Kanagy  
Bell  
Keyser

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Cross Section of Section F (1200' to 2150' So.  
of 0+00 & Texas St, Base Line to 400' East.)

B.M. Hub	+	H.I.	-	1441/21
B.L. 11+15	6.00	280.15		274.15
B.L. +25				
12+25		8.8		271.4
+50		7.5		272.7
+75		6.6		273.6
13+00		6.1		274.1
+25		6.0		274.2
+50		6.5		273.7
+75		7.0		273.2
14+00		7.4		272.8
+25		7.8		272.4
+50		8.0		272.2
+75		7.9		272.3
15+00		8.0		272.2
+25		8.2		272.0
+50		8.2		272.0
+75		8.3		271.9
16+00		8.3		271.9
+25		8.8		271.4
+50		9.4		270.8
+75		9.9		270.5
17+00		10.0		270.2

	+	H.I.	-
		280.15	
B.L. +25			
17+25		10.2	270.0
+50		10.6	269.6
+75		10.2	270.0
18+00		9.5	270.7
+25		8.9	271.3
+50		9.1	271.1
+75		9.6	270.6
19+00		10.2	270.0
+25		11.2	269.0
+50		11.9	268.3
+75		12.5	267.7
20+00		12.9	267.3
+25		13.8	266.4
+50		14.7	265.5
+75		15.2	265.0
21+00		16.0	264.2
+25		17.1	263.1
+50		17.4	262.8
B.L. +45, 21+50		19.9	260.5
A, 21+50		23.2	257.0
A+03, 21+50		24.8	255.4
A+08, 21+50		20.7	259.5

+	H.I.	-
	280.15	

B.L.+45, 21+25	19.9	260.5
A, 21+25	20.6	259.6
A+05, 21+25	19.0	261.2
A, 21+00	17.0	263.2
20+75	15.8	264.4
+50	14.6	265.6
+25	13.7	266.5
+00	12.8	267.4
19+75	11.6	268.6
+50	11.0	269.2
+25	10.2	270.0
+00	9.6	270.6
18+75	9.1	271.1
+50	8.4	271.8
+25	8.1	272.1
+00	8.5	271.7
17+75	8.8	271.4
+50	8.9	271.3
+25	8.8	271.4
+00	8.5	271.7
16+75	8.6	271.6
+50	8.3	271.9
+25	8.0	272.2
+00	7.7	272.5

+	H.I.	-
	280.15	

A		+	H.I.	-
15+75		7.6	272.6	
+50		7.5	272.7	
+25		7.5	272.7	
+00		7.4	272.8	
14+75		7.4	272.8	
+50		7.0	273.2	
+25		6.6	273.6	
+00		6.2	274.0	
13+75		5.9	274.3	
+50		6.0	274.2	
+25		6.0	274.2	
+00		6.5	273.7	
12+75		7.5	272.7	
+50		8.9	271.3	
+25		10.0	270.2	
A+25				
12+25		11.2	269.0	
+50		10.5	269.7	
+75		9.3	270.9	
13+00		8.5	271.7	
+25		7.5	272.7	
+50		6.8	273.4	
+75		6.2	274.0	

280.15

A+25

14+00	5.5	274.7
+25	6.0	274.2
+50	6.2	274.0
+75	6.3	273.9
15+00	6.4	273.8
+25	6.6	273.6
+50	6.6	273.6
+75	6.6	273.6
16+00	6.6	273.6
+25	6.6	273.6
+50	6.9	273.3
+75	7.3	272.9
17+00	6.9	273.3
+25	7.1	273.1
+50	7.0	273.2
+75	7.4	272.8
18+00	7.3	272.9
+25	7.0	273.2
+50	7.2	273.0
+75	7.9	272.3
19+00	8.2	272.0
+25	8.9	271.3
+50	9.5	270.7

+ H.I. -

280.15

A+25

19+75	10.5	269.7
20+00	11.5	268.7
+25	12.5	267.7
+50	13.5	266.7
+75	14.7	265.5
21+00	15.6	264.6
+25	16.9	263.3
+50	18.6	261.6

B

21+50	16.1	264.1
+25	15.1	265.1
+00	13.8	266.4
20+75	12.7	267.5
+50	11.8	268.4
+25	10.8	269.4
+00	9.8	270.4
19+75	8.9	271.3
+50	7.7	272.5
+25	6.9	273.3
+00	6.3	273.9
18+75	6.0	274.2
+50	5.3	274.9
+25	4.9	275.3

	+	H.I.	-	
		280.15		
B				
18+00			5.4	274.8
17+75			5.4	274.8
+50			4.8	275.4
+25			4.3	275.9
+00			4.4	275.8
16+75			4.5	275.7
+50			4.4	275.8
+25			4.4	275.8
+00			4.4	275.8
15+75			4.4	275.8
+50			4.9	275.3
+25			5.0	275.2
+00			5.2	275.0
14+75			5.4	274.8
+50			5.6	274.6
+25			5.9	274.3
+00			6.3	273.9
13+75			7.0	273.2
+50			8.0	272.0
+25			9.2	271.0
+00			9.9	270.3
12+75			10.6	269.6
+50			11.5	268.7
+25			12.0	268.2

	+	H.I.	-	
		280.15		
B+25				
12+25			12.4	267.8
+50			12.1	268.1
+75			11.6	268.6
13+00			11.0	269.2
+25			10.3	269.9
+50			9.1	271.1
+75			7.7	272.5
14+00			7.0	273.2
+25			6.3	273.9
+50			5.6	274.6
+75			5.1	275.1
15+00			4.8	275.4
+25			4.5	275.7
+50			4.2	276.0
+75			4.2	276.0
16+00			3.9	276.3
+25			3.5	276.7
+50			3.3	276.9
+75			3.1	277.1
17+00			3.1	277.1
+25			3.4	276.8
+50			3.6	276.6
+75			3.9	276.3

	+	H.I.	-	
		280.15		
B+25				
18+00			4.2	276.0
+25			4.4	275.8
+50			4.7	275.5
+75			5.3	274.9
19+00			5.7	274.5
+25			6.3	273.9
+50			7.0	273.2
+75			7.7	272.5
20+00			8.6	271.6
+25			9.5	270.7
+50			10.5	269.7
+75			11.3	268.9
21+00			12.2	268.0
+25			13.4	266.8
+50			14.3	265.9
C				
21+50			13.4	266.8
+25			12.0	268.2
+00			10.9	269.3
20+75			9.9	270.3
+50			9.2	271.0
+25			8.3	271.9
+00			7.3	272.9

	+	H.I.	-	
		280.15		
C				
19+75			6.7	273.5
+50			6.2	274.0
+25			5.7	274.5
+00			5.3	274.9
18+75			4.8	275.4
+50			4.6	275.6
+25			4.4	275.8
+00			4.2	276.0
19+75			3.9	276.3
+50			4.0	276.2
+25			3.8	276.4
+00			3.6	276.6
16+75			3.6	276.6
+50			3.6	276.6
+25			3.7	276.5
+00			4.1	276.1
15+75			4.4	275.8
+50			4.8	275.4
+25			5.0	275.2
+00			5.2	275.0
14+75			5.6	274.6
+50			6.2	274.0
+25			7.0	273.2

	+	H.I.	-	
		280.15		
C				
14+00			8.1	272.1
13+75			9.2	271.0
+50			10.1	270.1
+25			11.1	269.1
+00			11.7	268.5
12+75			12.2	268.0
+50			12.4	267.8
+25			12.8	267.4
C+25				
12+25			13.2	267.0
+50			12.9	267.3
+75			12.2	268.0
13+00			12.1	268.1
+25			11.5	268.7
+50			10.9	269.3
+75			9.8	270.4
14+00			8.5	271.7
+25			7.4	272.8
+50			6.8	273.4
+75			6.3	273.9
15+00			6.0	274.2
+25			5.7	274.5
+50			5.5	274.7

	+	H.I.	-	
		280.15		
C+25				
15+75			4.8	275.4
16+00			4.4	275.8
+25			4.3	275.9
+50			3.9	276.3
+75			4.1	276.1
17+00			4.3	275.9
+25			4.8	275.4
+50			5.0	275.2
+75			5.3	274.9
18+00			5.4	274.8
+25			5.7	274.5
+50			5.4	274.8
+75			5.5	274.7
19+00			5.8	274.4
+25			6.3	273.9
+50			6.5	273.7
+75			7.2	273.0
20+00			7.5	272.7
+25			7.9	272.3
+50			8.8	271.4
+75			10.2	270.0
21+00			11.2	269.0
+25			12.1	268.1
+50			13.4	266.8

	+	H.L.	-
		280.15	
II			
21+50		15.5	264.7
+25		14.3	265.9
+00		13.2	267.0
20+75		12.2	268.0
+50		11.5	268.7
+25		10.3	269.9
+00		9.6	270.6
19+75		9.0	271.2
+50		8.3	271.9
+25		7.8	272.4
+00		7.5	272.7
18+75		7.3	272.9
+50		6.9	273.3
+25		6.6	273.6
+00		6.5	273.7
17+75		6.0	274.2
+50		5.7	274.5
+25		5.4	274.8
+00		5.0	275.2
16+75		4.7	275.5
+50		4.6	275.6
+25		4.5	275.7
+00		4.8	275.4

	+	H.L.	-
		280.15	
II			
15+75		5.4	274.8
+50		5.6	274.6
+25		6.0	274.2
+00		6.7	273.5
14+75		6.7	273.5
+50		7.6	272.6
+25		8.6	271.6
+00		9.4	270.8
13+75		10.4	269.8
+50		11.1	269.1
+25		11.6	268.6
+00		12.1	268.1
12+75		12.9	267.3
+50		14.0	266.2
+25		15.0	265.2
II+25			
12+25		16.1	264.1
+50		16.2	264.0
+75		14.4	265.8
13+00		12.9	267.3
+25		12.0	268.2
+50		11.6	268.6
+75		10.8	269.4

	+	H.I.	-	
		280.15		
II+25				
14+00			10.0	270.2
+25			9.3	270.9
+50			8.0	272.2
+75			7.4	272.8
15+00			7.5	272.7
+25			7.1	273.1
+50			6.9	273.5
+75			6.0	274.2
16+00			5.5	274.7
+25			5.2	275.0
+50			5.0	275.2
+75			5.2	275.0
17+00			5.5	274.7
+25			6.0	274.2
+50			6.3	273.9
+75			6.7	273.5
18+00			7.1	273.1
+25			7.6	272.6
+50			8.3	271.9
+75			8.6	271.6
19+00			9.1	271.1
+25			9.4	270.8
+50			10.8	269.4

	+	H.I.	-	
		280.15		
II+25				
19+75			11.3	268.9
20+00			12.3	267.9
+25			13.2	267.0
+50			14.5	265.7
+75			15.5	264.7
E				
20+75			19.3	260.9
+50			18.5	261.7
+25			17.2	263.0
+00			15.9	264.3
19+75			14.2	266.0
+50			13.2	267.0
+25			12.0	268.2
+00			11.1	269.1
18+75			10.6	269.6
+50			9.7	270.5
+25			9.0	271.2
+00			8.3	271.9
17+75			7.6	272.6
+50			7.4	272.8
+25			7.0	273.2
+00			6.6	273.6
16+75			6.5	273.7



	+	H.I.	-	
		280.15		
E				
16+50			6.3	273.9
+25			6.4	273.8
+00			6.3	273.9
15+75			6.8	273.4
+50			7.3	272.9
+25			7.9	272.3
+00			8.0	272.2
14+75			8.2	272.0
+50			8.5	271.7
+25			9.0	271.2
+00			10.0	270.2
13+75			10.9	269.3
+50			12.0	268.2
+25			13.1	267.1
+00			15.3	264.9
12+75			17.6	262.6
+50			17.7	262.5
+25			16.6	263.6
E+25				
12+25			14.6	265.6
+50			18.2	262.0
+75			18.8	261.4
13+00			17.1	263.1

	+	H.I.	-	
		280.15		
E+25				
13+25			13.9	266.3
+50			12.5	267.7
+75			11.5	268.7
14+00			10.2	270.0
+25			9.4	270.8
+50			9.4	270.8
+75			9.0	271.2
15+00			9.5	270.7
+25			9.2	271.0
+50			8.6	271.6
+75			8.2	272.0
16+00			7.8	272.4
+25			7.3	272.9
+50			8.3	271.9
+75			7.8	272.4
17+00			8.5	271.7
+25			8.9	271.3
+50			9.6	270.6
+75			10.2	270.0
18+00			10.5	269.7
+25			10.9	269.3
+50			12.2	268.0
P. Rock E, 16+00	3.38	274.03	9.50	270.65 ✓

	+	H.I.	-	
		274.03		
E+25				
18+75			7.5	266.5
19+00			8.5	265.5
+25			8.8	265.2
+50			10.7	263.3
+75			12.6	261.4
20+00			14.2	259.8
+25			15.5	258.5
F				
20+00			18.6	255.4
19+75			16.8	257.2
+50			15.0	269.0
+25			13.2	270.8
19+00			13.1	270.9
18+75			12.1	271.9
+50			9.6	274.4
+25			8.3	275.7
+00			7.2	276.8
19+75			6.7	277.3
+50			5.7	278.3
+25			4.9	279.1
+00			4.2	279.8
16+75			3.6	280.4
+50			3.3	280.7

	+	H.I.	-	
		274.03		
F				
16+25			3.4	270.6
+00			3.4	270.6
15+75			3.3	270.7
+50			3.3	270.7
+25			3.9	270.1
+00			4.1	269.9
14+75			4.0	270.0
+50			4.1	269.9
+25			4.3	269.7
+00			4.5	269.5
13+75			5.7	268.3
+50			6.5	267.5
+25			8.3	265.7
+00			12.2	261.8
12+75			15.4	258.6
+50			11.0	263.0
+25			7.2	266.8
F+25				
12+25			6.2	267.8
+50			10.1	263.9
+75			15.0	259.0
+82			18.2	255.8
13+00			13.8	260.2

274.03

F +25

13+25	9.7	264.3
+50	7.0	267.0
+75	6.1	267.9
14+00	5.1	268.9
+25	5.0	269.0
+50	5.2	268.8
+75	5.2	268.8
15+00	5.1	268.9
+25	4.6	269.4
+50	4.1	269.9
+75	4.1	269.9
16+00	4.7	269.3
+25	4.8	269.2
+50	4.9	269.1
+75	5.1	268.9
17+00	5.8	268.2
+25	6.6	267.4
+50	7.9	266.1
+75	9.0	265.0
18+00	10.4	263.6
+25	11.2	262.8
+50	13.0	261.0
+75	15.9	258.1

274.03

F+25

19+00	18.3	255.7
+25	18.6	255.4
+50	19.9	254.1
+75	21.1	252.9
G		
19+25	25.5	248.5
+00	26.0	248.0
18+75	22.1	251.9
+50	16.8	257.2
+25	14.3	259.7
+00	13.0	261.0
17+75	11.2	262.8
+50	10.1	263.9
+25	8.5	265.5
+00	7.7	266.3
16+75	6.9	267.1
+50	6.2	267.8
+25	5.9	268.1
+00	5.7	268.3
15+75	5.0	269.0
+50	5.2	268.8
+25	5.4	268.6
+00	5.9	268.1

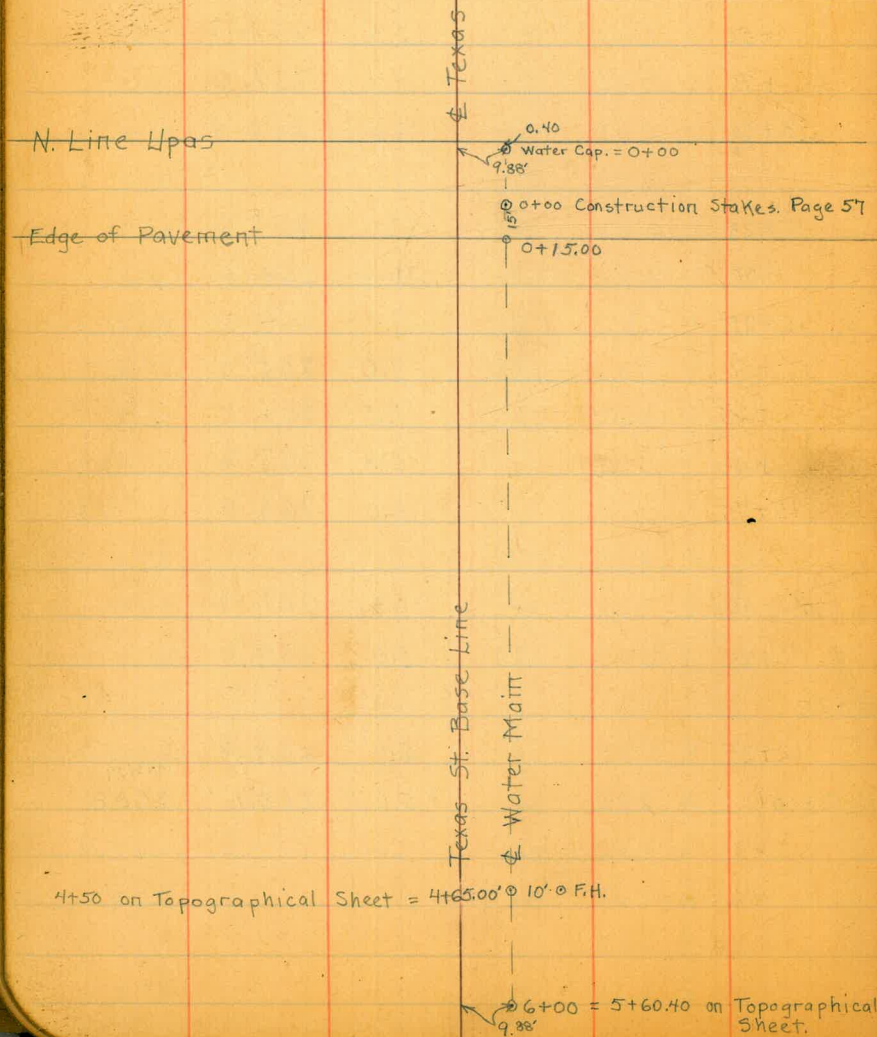
	+	H.I.	
		274.03	
G			
14+75		6.0	268.0
+50		6.0	268.0
+25		5.9	268.1
+00		6.2	267.8
13+75		7.0	267.0
+50		8.9	265.1
+25		13.1	260.9
+00		18.5	255.5
12+88		22.3	251.7
+75		17.6	256.4
+50		9.3	264.7
12+25		6.1	267.9
G+25			
12+25		5.7	268.3
+50		8.2	265.8
+75		13.1	260.9
~~~~~			
15+50		5.7	268.3
+75		5.8	268.2
16+00		6.0	268.0
+25		6.8	267.2
+50		7.7	266.3
+75		8.4	265.6

	+	H.I.	-	
		274.03		
G+25				
17+00		9.2	264.8	
+25		10.6	263.4	
+50		12.3	261.7	
+75		14.4	259.6	
18+00		16.2	257.8	
H				
17+25		13.0	261.0	
+00		10.6	263.4	
16+75		9.4	264.6	
+50		9.0	265.0	
+25		7.5	266.5	
+00		6.8	267.2	
15+75		6.0	268.0	
~~~~~				
12+50		6.3	267.7	
+25		5.0	269.0	
H+25				
12+25		5.0	269.0	
F, 12+00		5.1	268.9	1443/29 268.8

3-5-32

Irebert  
Mosien  
Olmstead  
De Perini

⊕ Location and Profile of Water Line from N.  
Line of Upas, 9.88' East of ⊕ of Texas St., to  
Field House and Swimming Pool.



## Profile of Water Line

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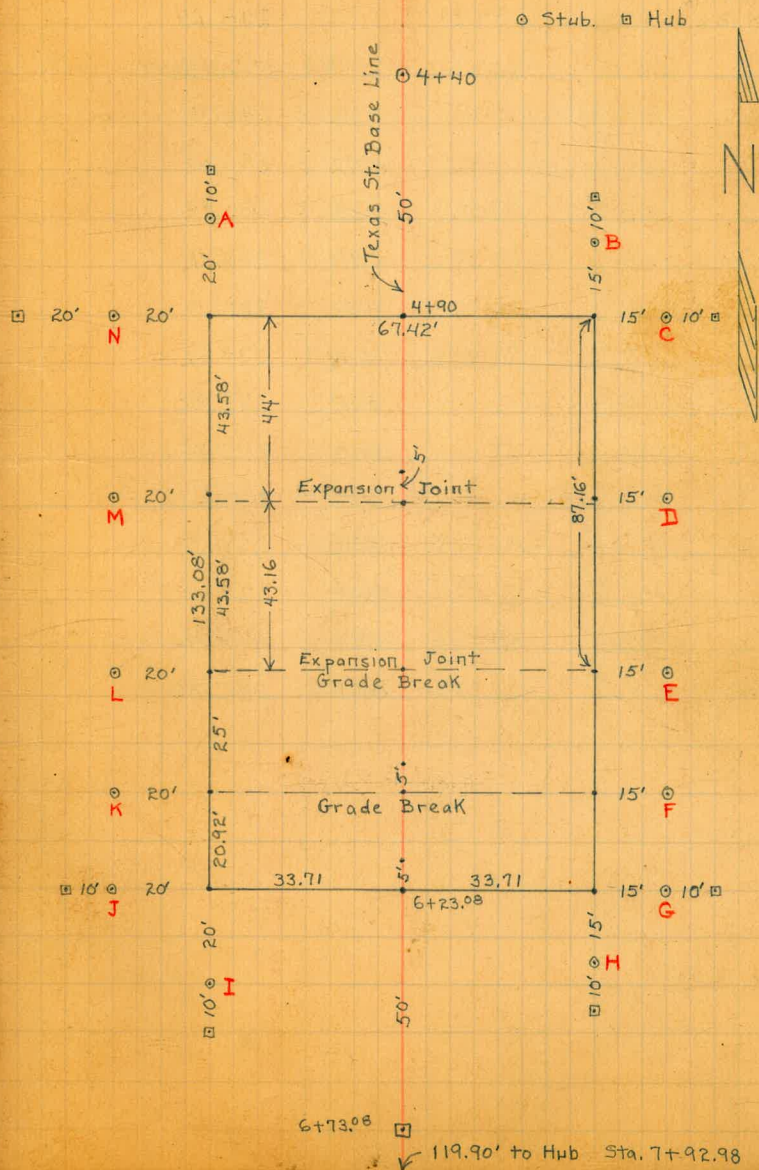
	+	H.I.	-	
C.T. on N. Prop. Line of Upas & E. 7' " of Texas.	2.85	283.77		280.92
Top of Water Cap			3.41	280.36
On Pavement				
+20 N. Gutter of Upas			3.72	280.05
+39.60 Header Board			3.45	280.32
+50			3.2	280.6
+75			3.4	280.4
1+00			4.1	279.7
+25			4.4	279.4
+50			4.8	279.0
+75			5.1	278.7
2+00			5.5	278.3
+25			5.5	278.3
+50			5.5	278.3
+75			5.6	278.2
3+00			5.5	278.3
+25			5.0	278.8
+50			4.6	279.2
+75			4.4	279.4
Offset Hub 3+40 P. Texas St. B.L.	6.18	285.40	4.55	279.22
				144 1/3 279.21
4+00			5.8	279.6
+25			5.3	280.1
+50			5.4	280.0
+75			5.3	280.1

4-8-'32

Irebert  
Mosien  
Olmsted  
De Perini

55

Outlay of Swimming Pool - Balboa Park Recreation Area



+ H.L. -  
285.40

5+00	5.2	280.2
+ 25	5.7	279.7
+ 50	5.2	280.2
+ 75	5.1	280.3
6+00	5.5	279.9
1' offset Hub 5+92 Texas St. B.L.	7.13	278.27 $\sqrt{278.24}$

4-8-'32

## Cuts and Fills on Swimming Pool

Station	+	H.I.	-	Elev.
Offset Hub 5+92 Texas St. B.L.	6.07	284.31		278.24
A			6.78	277.53
B			3.96	280.35
C			3.42	280.89
D			3.38	280.93
E			3.79	280.52
F			4.21	280.10
G			4.49	279.82
H			5.43	278.88
I			8.53	275.78
J			8.84	275.47
K			8.46	275.85
L			8.82	275.49
M			7.93	276.38
N			8.01	276.30

56

Sidewalk Subgrade		Slab Subgrade		Top of Curb 279.62
278.66	F1.13	275.62	C1.91	F2.09
"	C1.69	"	C4.73	C0.73
"	C2.23	"	C5.27	C1.27
"	C2.27	273.87	C7.06	C1.31
"	C1.86	272.12	C8.40	C0.90
"	C1.44	269.12	C10.98	C0.48
"	C1.16	270.12	C9.70	C0.20
"	C0.22	"	C8.76	F0.74
"	F2.88	"	C5.66	F3.84
"	F3.19	"	C5.35	F4.15
"	F2.81	269.12	C6.73	F3.77
"	F3.17	272.12	C3.37	F4.13
"	F2.28	273.87	C2.51	F3.24
"	F2.36	275.62	C0.68	F3.32

4-9-32

Drebert  
Mosien  
Olmsted  
De PeriniConstruction Stakes on Water Line to Swimming  
Pool and Field House.

Station	+	H.I.	-	Elev.
C.T. on N. Prop. Line of Hpas and E. 7' Line of Texas St.	2.48	283.40		1443 1/2 280.92
0+00 (75' So. of N. Line of Hpas & 5' E. of Texas St. Bldg.)			3.35	280.05
+50			3.12	280.28
1+00			3.99	279.41
+50			4.91	278.49
2+00			5.24	278.16
+50			5.15	278.25
3+00			4.76	278.64
+50			4.05	279.35
4+00			3.47	279.93
+50			3.17	280.23
5+00 (5' N. of N. Line of Pool)			3.95	279.45
1+41 (Special shot on top of 4" E.W. Water Pipe)			5.16	278.24
C.T. B.M. Flow Line Grade at 0+00	3.67	284.59		280.92 4-15-32
			7.34	277.25

Flow Line  
Grade

Cut

277.50

Flow Line grade checked at  
277.25 4-15-32.

277.25

3.0

277.00

2.4

276.75

1.7

276.50

1.7

276.25

2.0

276.00

2.6

276.17

3.2

276.25

3.7

276.37

3.9

276.50

3.0

57



4-14-32

Drebert  
Mosien  
Olmsted  
De Perini

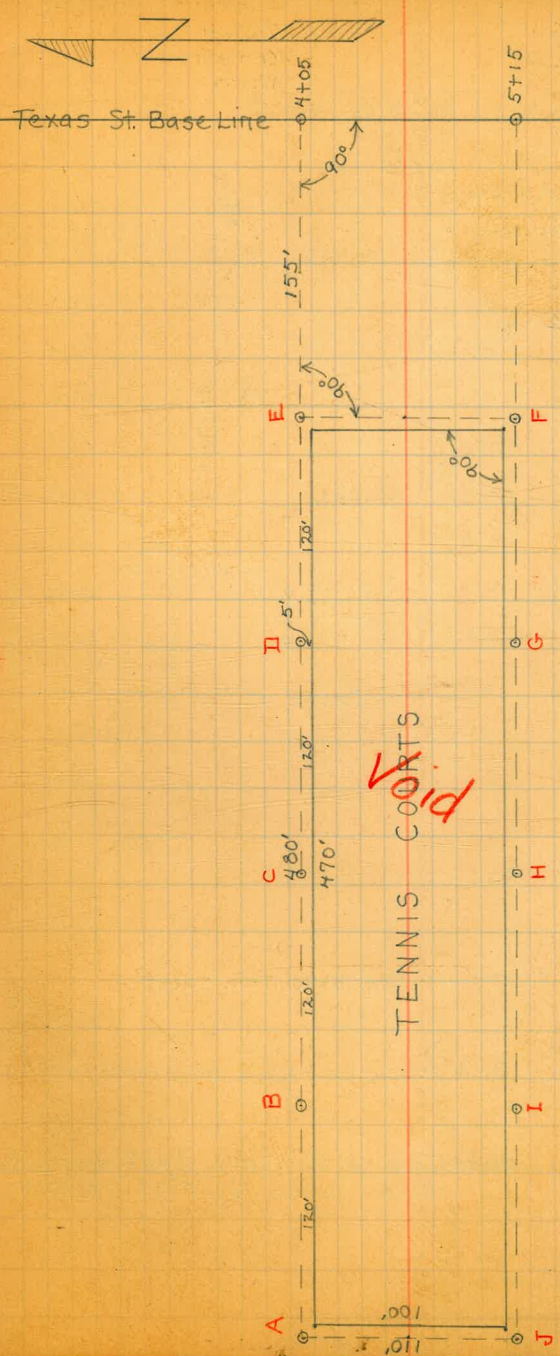
Grade Stakes on Tennis Courts (410' to 510' So.  
of 0+00 and 160' to 630' West of Texas St. B.L.)

Subgrade Elev. 271.50'

Station	+	H.I.	-	Elev.	
B.M. 1' offset Hub B.L. 3+40	0.01	279.22		279.21	
A			6.74	272.48	C0.98
B			4.81	274.41	C2.91
C			6.39	272.83	C1.33
D			7.06	272.16	C0.66
E			5.52	273.70	C2.20
F			6.63	272.59	C1.09
G			8.69	270.53	F0.97
H			9.14	270.08	F1.42
I			6.69	272.53	C1.03
J			9.20	270.02	F1.48

Void  
See Page 61

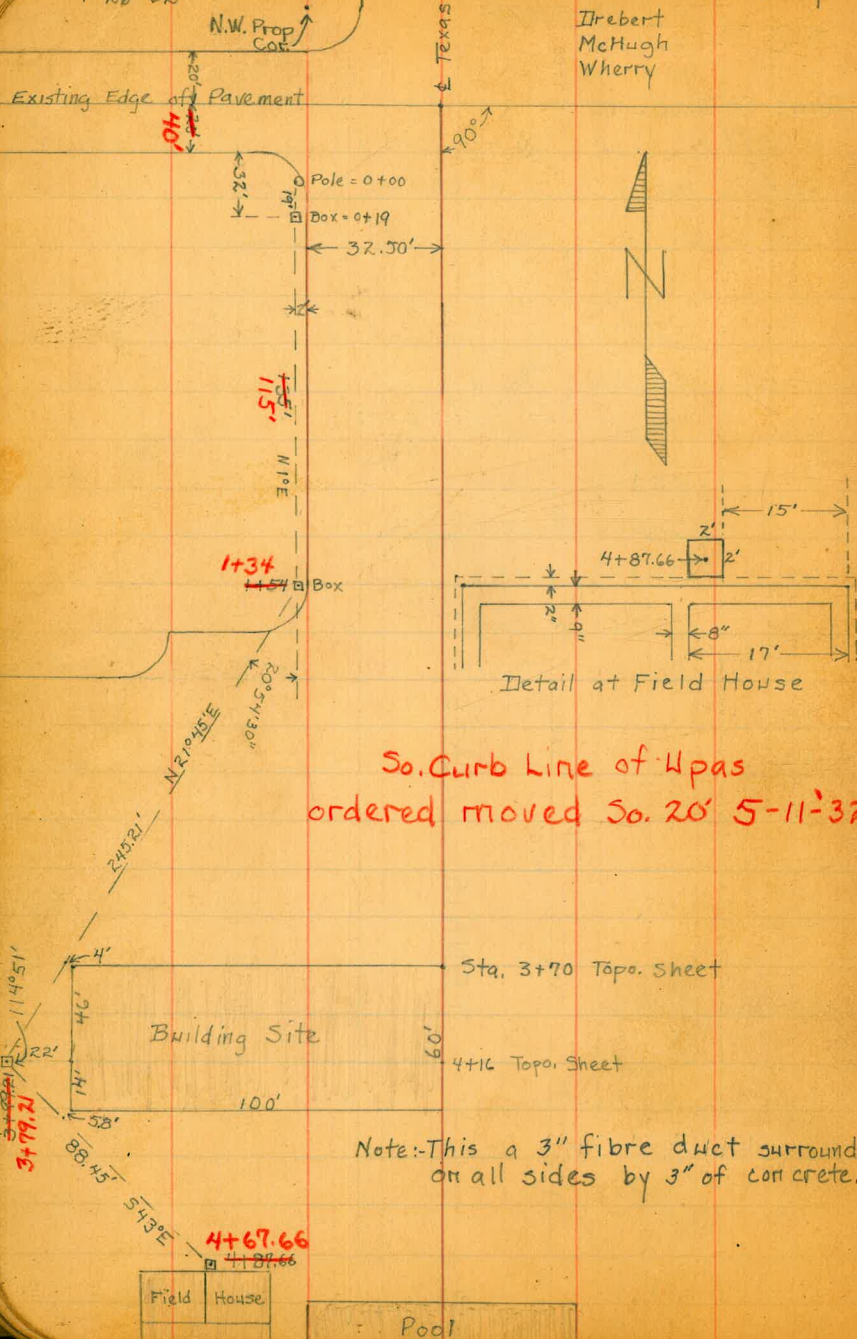
58



4-26-32

Electric Conduit Survey

Irebert  
McHugh  
Wherry



So. Curb Line of Upas  
ordered moved So. 20' 5-11-32

Note: This a 3" fibre duct surrounded  
on all sides by 3" of concrete.

Profile of  $\phi$  of Conduit

Station	+	H.L.	-
C.T. on N. Prop. line of Upas 2 E. 7' Line of Texas.	3.48	284.40	280.92
0+00			4.3 280.1
+19			4.8 279.5
+50			5.2 279.2
1+00			6.4 278.0
TP <del>34</del> 34	4.83	282.26	6.97 277.43 ← Removed
2+00			5.0 277.3
+50			5.4 276.9
3+00			5.8 276.5
+50			6.2 276.1
<del>79.21</del> 79.21			7.7 274.6
4+50			6.9 275.4
<del>67.66</del> 67.66			6.3 276.0
1' offset Hub B.L.			14-1/3
3+40			3.05 279.21 279.21
B.M.			
See Above.	1.90	282.82	280.92
0+23.5 (Conduit Sta)			6.18 276.64
			Bottom of Pipe

Note: 0+23.5 on Conduit Line = 1+41.50 on Water Line

4-27-32

4-29-32

Herbert  
McHugh  
Wherry

## Construction Stakes on Electric Conduit Line

Station	+	H.I.	-	Elev
C.T. on N. Prop. Line of 4 Pos & E. 7' Line of Texas	1.90	282.82		1443/1 280.92
<del>93</del> So. of N. Line of 4 Pos & 34.5' W. of Texas St. B.L.			2.7	280.1
(First + 19 } Pull Box			3.2	279.6
+ 50			3.6	279.2
1+00			4.8	278.0
<del>34</del> (Second + 51 } Pull Box			5.5	277.3
2+00			5.6	277.2
+ 50			6.0	276.8
3+00			6.4	276.4
+ 50			6.8	276.0
<del>79.21</del> (Third + 97.21 } Pull Box			8.2	274.6
4+50			7.6	275.2
<del>67.66</del> (End + 87.66 } Pull Box			7.0	275.8
1' offset Hub 3+40			3.61	279.21

1441/3  
279.21

Note :- So. Line of Parking Area is Sta. 2+70±

Grade there is 275.0'

Elevations of  
Top of Concrete  
Covering Conduit **60**

H.I.

277.53 B.M.

+ 5.75

283.28

Station

-

5' W	0+03	4.6	278.7
"	+19	4.7	278.6
"	+50	5.6	277.7
"	1+00	6.6	276.7
"	+34	6.6	276.7
"	+50	7.0	276.3
"	2+00	7.2	276.1
"	+50	7.0	276.3
"	+70	7.5	275.8
"	3+00	7.3	276.0
5' So.	+50	8.0	275.3
"	+79.21	8.7	274.6
	4+00	9.0	274.3
	+50	7.5	275.8
	+65	7.5	275.8

5-4-32

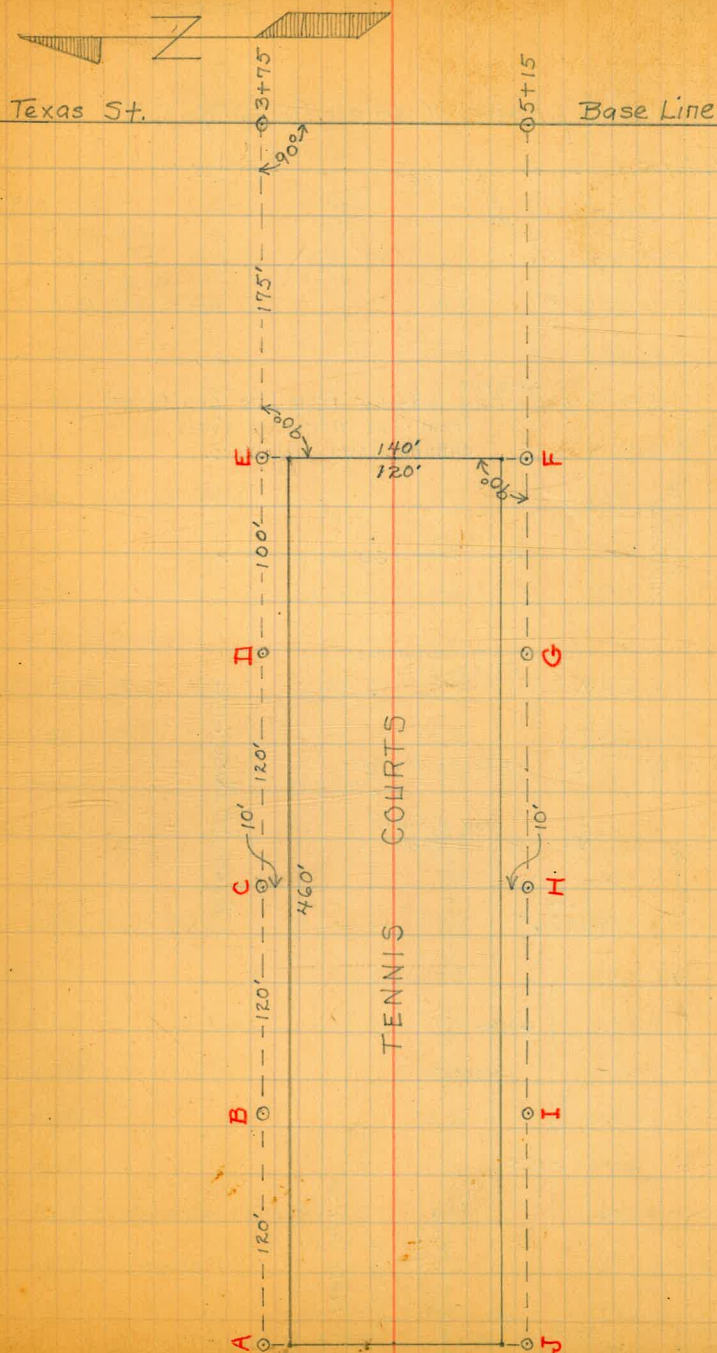
Irebert  
McHugh  
Wherry

Grade Stakes on Tennis Courts (385' to 505' So.  
of 0+00 and 175' to 635' West of Texas St. B.L.)  
1' Fall in 120' from N. to S.

Station	+	H.I.	-	Elev	
Grade Stake	6.11	276.19		<sup>1443/58</sup> 270.08	
272.50' A B C D E			3.70	272.49	F0.01
			1.35	274.84	C2.34
			2.51	273.68	C1.18
			3.78	272.41	F0.09
			2.64	273.55	C1.05
271.50' F G H I J			4.79	271.40	F0.10
			5.66	270.53	F0.97
			6.11	270.08	F1.42
			3.66	272.53	C1.03
			6.17	270.02	F1.48

Courts extended 8' south (128' overall instead of  
120') as per instructions of Mr. Phelps Oct. 1932  
1' Fall in 128' from N. to S.

Irebert

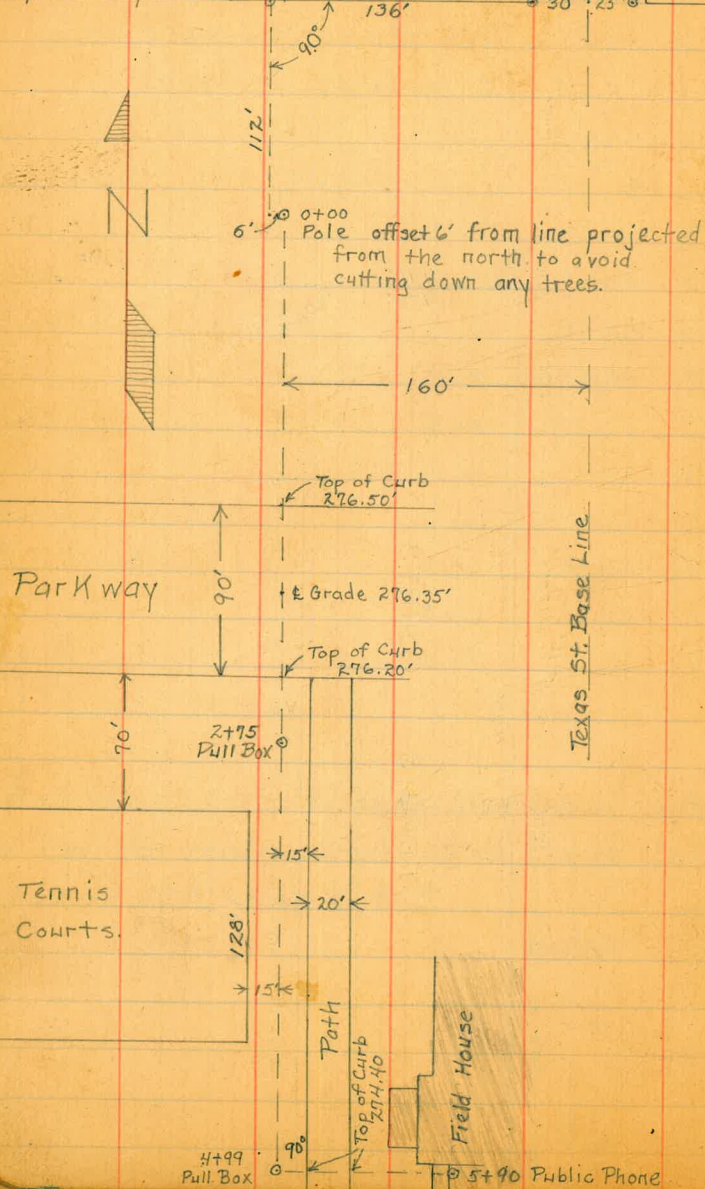


6-20-32

Drebert

## Telephone Cable Survey

N. Prop. Line Hpas.



## Telephone Cable &amp; Profile

Station	+	Hil.	-	Elev.
C.T. on N. Prop. Line of Hpas & E.T. Line of Texas				
0+00	0.53	281.45		280.92
72' So. of Pavement Edge.				
+50			4.0	277.4
+50			5.0	276.4
1+00			6.1	275.3
+50			6.9	274.5
+53			5.3	276.1
Edge of Road				
2+00			5.4	276.0
+50			5.7	275.7
+75			5.9	275.5
Pull Box				
7+90	4.94	280.25	6.14	275.30
E Brk Line				
3+00			6.4	273.8
+50			7.2	273.0
4+00			8.1	272.1
+50			7.9	272.3
+99			7.6	272.6
Pull Box				
5+11			7.5	272.7
+14			5.8	274.4
Edge of Path				
+34			5.6	274.6
" " "				
+37			6.6	273.6
+50			6.1	274.1
+82.5			3.9	276.3
Outside Foundation				
+83.5			3.2	277.0
Inside "				
+90			2.2	278.0
Pool Stake				
			2.69	277.54

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Page 56  
277.53

6-22-32

Prebert

63

## Construction Stakes on Telephone Conduit.

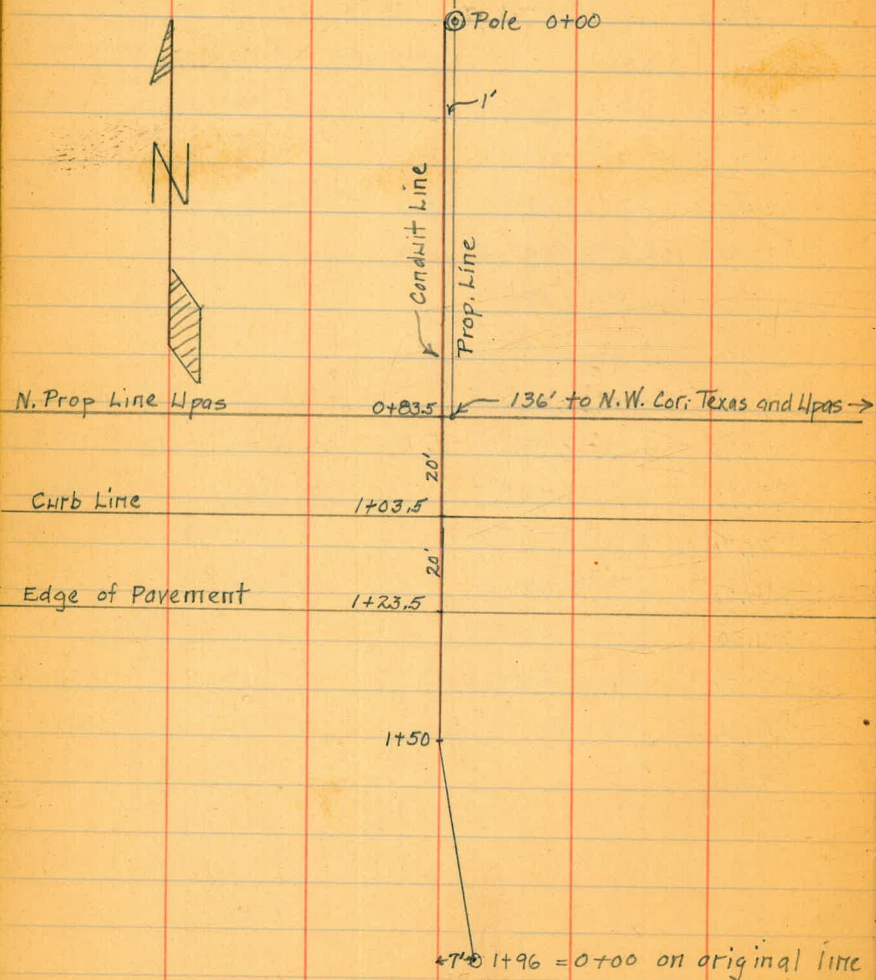
Station	+	H.I.	-	Elev.	Flow Line Grade	Cut.
C.T. N. Prop. 11 pas E. 7' Line Texas	0.10	281.02		1443/1 280.92		
(112' So. of 0+00 N. Prop. 11 pas.			3.36	277.66	275.90	1.76
+50			4.48	276.54	275.23	1.31
1+00			5.53	275.49	274.58	0.91
+50			6.16	274.86	273.93	0.93
2+00			4.89	276.13	273.28	2.85
+50			5.09	275.93	272.63	3.30
+75 Pull Box			5.36	275.66	272.30	3.36
3+00			6.01	275.01	272.18	2.83
+50			7.33	273.69	271.96	1.73
4+00			8.22	272.80	271.74	1.06
+50			8.02	273.00	271.52	1.48
+99 Pull Box			8.24	272.78	271.30	1.48
5+50			6.77	274.25	272.30	1.95
+82					272.94	
+90					273.10	

7-20-37

Irebert

Telephone Conduit

Extension



Extension Construction Stakes

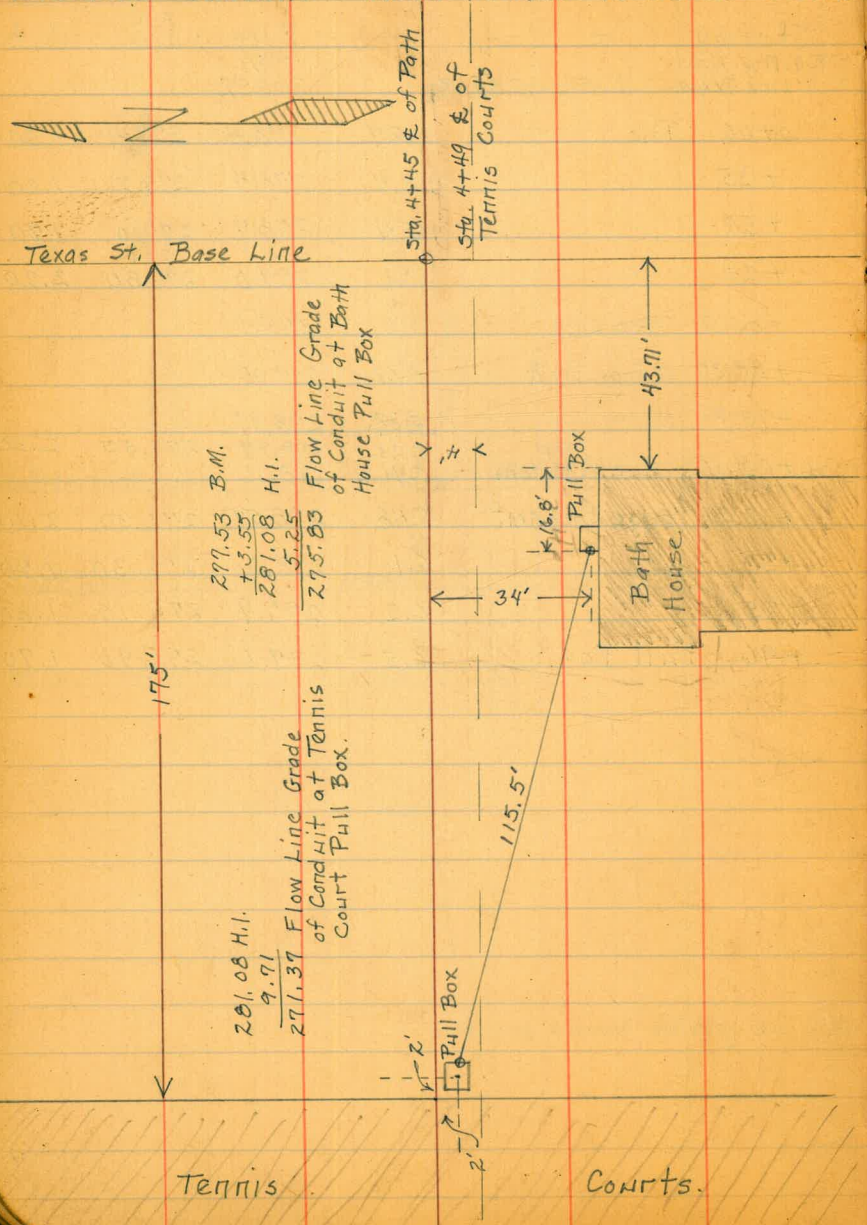
Station	+	H.I.	-	Elev.	Flp Line	Cut
C.T. N. Prop. Hpas E. 7' Line Texas	3.15	284.07		1443/1 280.92		
0+00	Pole		5.7	278.4	277.4	1.00
+25			5.7	278.4	277.2	1.20
+50			5.4	278.7	277.0	1.70
+75			5.1	279.0	276.80	2.20
+83.50	Prop. Line		5.0	279.1		
+88.30	N. Edge Walk		5.02	279.05		
+93.30	S. " "		5.08	278.99		
1+03.50	Curb	{ Top Bottom	5.20 5.91	278.87 278.16	276.55	2.30
+23.50	Edge Pavement		5.48	278.59	276.50	2.10
+50	L		6.1	278.0	276.30	1.70
+75			6.2	277.9	276.10	1.80
+96	Full Box		6.5	277.6	275.90	1.70

7-20-32

Drebert

65

# Electric Conduit - Field House to Tennis Courts



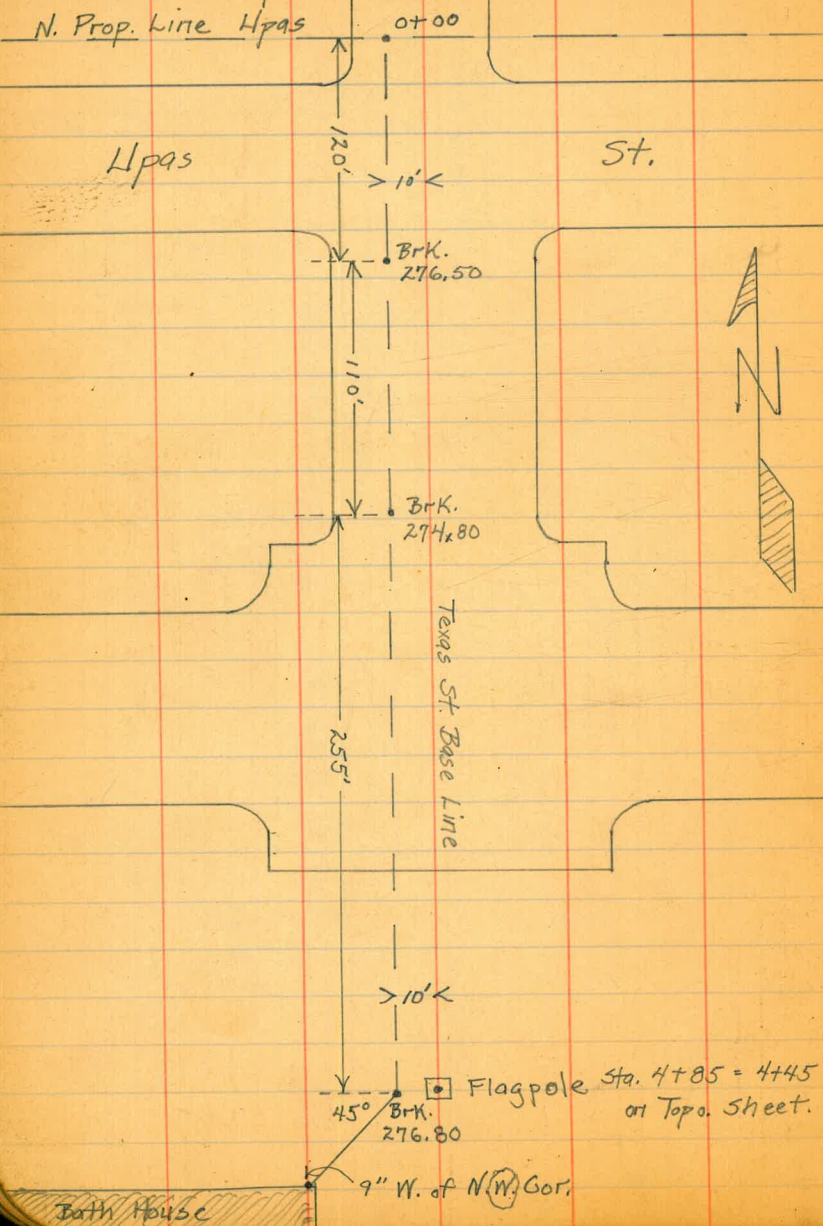


10-15-32

Irebert

66

Gas Main - Hpas & Texas to Bath House



Chalmers St. Cross Section  
 E.L. India to E.L. Columbia

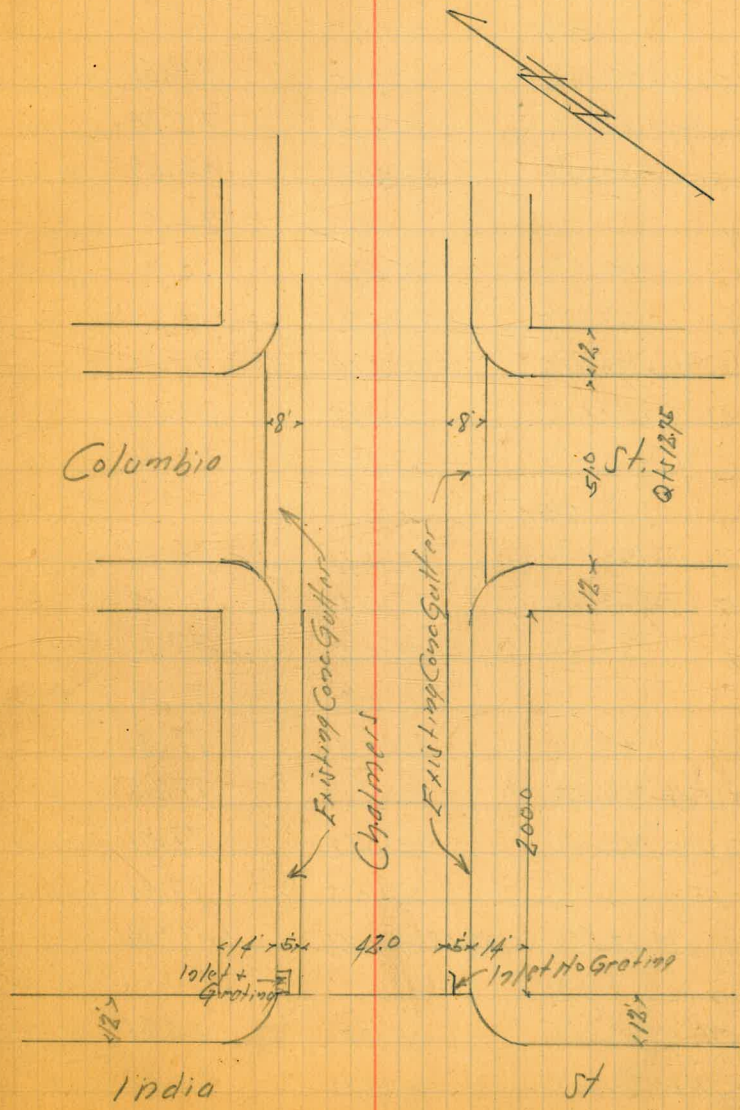
80' wide  
 2 1/2' to 10.5'  
 42' Bot Edge of Gutter

Indexed  
 C.S.K.

3-1-33  
 Moore  
 513507

67

BM	11.55	77.63	66.08	54.88 Chalmers St India
				E.L. India
S Cb Top		9.62	68.01	
+5 = Edge Gutter		9.51	68.12	
1/4" Pavng		9.58	68.05	
1/4" "		9.65	67.98	+
1/4" "		9.66	67.97	
+10.5 = Edge Gutter		9.58	68.05	
11 Cb Top + Pavng		9.57	68.06	
				12' E of E.L. India
N Cb in Drive		8.77	68.86	
+5 = Edge Gutter		8.49	69.14	
1/4" "		8.3	69.3	
1/4" "		8.2	69.4	+
1/4" "		8.7	68.91	
+10.5 Edge Gutter		8.53	69.10	
S Cb Gutter		8.89	68.74	
Top Cb		8.08	69.55	
				25' E of E.L. India
S Cb Top		6.41	71.22	
Gutter		7.24	70.39	
+5 = Edge Gutter		6.92	70.71	
1/2		7.2	70.4	
1/2		6.9	70.7	
1/2		6.9	70.7	



## Chalmers

77.63

↓ +10.5 Edge Gutter	6.78	70.85
N.Cb 12 Drive	7.01	70.59
50.F		
N.Cb Top	3.05	74.58
Gutter	3.84	73.79
↓ +5 - Edge Gutter	3.56	74.07
1/4	3.7	73.9
↓ 1/2	3.7	73.9
1/4	3.9	73.9
↓ +10.5 Edge Gutter	3.69	73.94
S.Cb Gutter	3.97	73.66
Top	3.17	74.46
75.F		
S.Cb Gutter	0.74	76.89
↓ +5 - Edge Gutter	0.44	77.19
1/4	0.5	77.1
↓ 1/2	0.2	77.4
1/4	0.3	77.3
↓ +10.5 Edge Gutter	0.38	77.25
N.Cb Gutter	0.62	77.01
Top	+0.18	77.81
TP 12.46	89.48	0.61
100.F		77.02
N.Cb Top	8.5	80.87
Gutter	9.28	80.20
↓ +5 - Edge Gutter	9.05	80.43

89.48

1/4	9.0	80.5
↓ 1/2 or N.H. Cover	8.51	80.97
1/4	8.9	80.6
↓ +10.5 Edge Gutter	9.13	80.35
S.Cb Gutter	9.42	80.06
S.Cb Top	8.57	80.91
125.F		
S.Cb Top	5.27	84.21
Gutter	6.11	83.37
↓ +5 - Edge Gutter	5.88	83.60
1/4	5.7	83.8
↓ 1/2	5.4	84.0
1/4	5.7	83.8
↓ +10.5 Edge Gutter	5.79	83.69
N.Cb Gutter	6.02	83.46
N.Cb Top	5.20	84.28
150.F		
N.Cb Top	2.04	87.44
Gutter	2.83	86.65
↓ +5 - Edge Gutter	2.58	86.90
1/4	2.4	87.1
↓ 1/2	3.5	87.0
1/4	2.7	86.7
↓ +10.5 Edge Gutter	2.60	86.88
S.Cb Gutter	2.89	86.59
S.Cb Top	2.07	87.41

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## Chalmers

89.48

TP	11.42	100.13	0.77	88.71
	17.55			
S Cb Top		9.59		90.54
Gutter		10.35		89.78
↓ +5 - Edge Gutter		10.06		90.07
1/4		10.4		89.7
↓ 1/2		10.0		90.1
1/4		10.1		90.0
↓ +10.5 - Edge Gutter		9.95		90.18
N Cb Gutter		10.23		89.90
N Cb Top		9.39		90.74
	18.85			
N Cb Top		7.70		92.43
Gutter		8.52		91.61
↓ +5 - Edge Gutter		8.30		91.83
1/4		8.5		91.6
↓ 1/2		8.6		91.5
1/4		8.9		91.2
↓ +10.5 Edge Gutter		8.47		91.66
S Cb Gutter		8.69		91.44
S Cb Top		7.88		92.35
	200.5 = N.S. Columbia			
S Cb Top		6.35		93.78
Gutter		7.29		92.84
↓ +5 - Edge Gutter		7.00		93.13
1/4		7.9		92.2

100.13

1/2	7.5	92.6	✓
1/4	7.3	92.8	
↓ +10.5 - Edge Gutter	6.62	93.41	
N Cb Gutter	6.81	93.32	
N Cb Top	6.11	94.02	
	N Cb		
N L Top Cb	6.12	94.01	
↓ N Edge Gutter	6.61	93.52	
Cb 17	6.77	93.36	
↓ +5 - S Edge	6.52	93.61	
1/4	6.3	93.8	
↓ 1/2	6.5	93.6	✓
1/4	6.9	93.2	
+10.5 - Edge Gutter	6.65	93.48	
Cb 07	6.93	93.20	
S Edge	6.73	93.40	
S L Top Cb	6.32	93.81	
	N 1/4		
S	5.8	94.3	
S Edge Gutter	5.89	94.24	
Cb 09	6.22	93.91	
↓ +5 - Edge	5.96	94.17	✓
1/4	6.0	94.1	
↓ 1/2	5.7	94.4	
1/4	5.5	94.6	
↓ +10.5 - Edge Gutter	5.83	94.30	

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## Chalmers

100.13

Cb 02 Gutter	617	93.96
N Edge	588	94.25
H.L.	58	94.3
H.L.	47	95.4
H Edge Gutter	517	94.96
Cb 02	546	94.67
+5 S Edge	528	94.85
1/4	50	95.1
1/2	51	95.0
1/4	51	94.7
+10.5 N Edge Gutter	523	94.90
Cb 02	555	94.58
S Edge	524	94.89
S.L.	47	95.4
S.L.	43	95.8
S Edge Gutter	457	95.56
Cb 02	487	95.26
H Edge	455	95.58
1/4	47	95.4
1/2	43	95.8
1/4	46	95.5
+10.5 Edge Gutter	451	95.62
Cb 02	478	95.35
H Edge	449	95.64

100.13

N.L.	40	96.1
F Cb		
H.L. Top Cb	341	97.02
Gutter Dist	34	96.7
H Edge Gutter	378	96.35
Cb 02	403	96.10
+5 Edge	376	96.37
1/4	40	96.1
1/2 of Dist of M.H.P. in	36	96.5
1/4	41	96.0
+10.5 Edge Gutter	391	96.22
Cb 02	422	95.91
S Edge	392	96.21
S.L. Top Cb	318	96.95
Dist	37	96.4
E.L. Columbia		
S Cb Top	316	96.97
Gutter	396	96.17
+5 Edge Gutter	368	96.45
1/4	35	96.6
1/2	32	96.9
1/4	36	96.5
+10.5 Edge Gutter	362	96.51
N Cb Gutter	390	96.23
N Cb Top	311	97.02
B.M.	302	97.11

SEBP  
Chalmers  
& Columbia  
1974

McCoo St Cross Section  
California to Ketter

40' Roadway  
10' 9/15

N.E.B.P.  
Hydrograph  
California

indexed  
c.s. 191

sec 2015  
14/1/49 31

8-13-23  
Moore  
North  
S. 15507

BM	7.96	60.47	52.51	
		0+0 - 12 =	E Gutter of California	
SCB on Paving	4.03	56.44		
1/4	3.86	56.61		
1/2	3.83	56.65		
3/4	3.62	56.85		
N.C.B.	3.50	56.97		
			E.L. California	
N.C.B. Top	2.55	57.92		
Gutter on Paving	3.22	57.25		
1/4	2.75	57.72		
1/2	2.78	57.69		
3/4	3.13	57.34		
S Gutter	3.91	56.56		
S.C.B. Top	3.31	57.16		
			127' E of E.L. Calif	
S.C.B. Top	1.77	58.70		
Gutter	2.5	58.0		
1/4	2.0	58.5		
1/2	1.7	58.8		
3/4	1.8	58.7		
N Gutter	2.0	58.5		
N.C.B. Top	0.93	59.54		
TP	1260	7286	0.21	60.86

	72.86		
			25' E of E.L. California
N.C.B. Top	11.91	60.95	
Gutter	12.7	60.2	
1/4	12.5	60.4	
1/2	12.5	60.4	
3/4	12.9	60.0	
Gutter	13.3	59.6	
S.C.B. Top	12.57	60.29	
			50' E of E.L. Calif
S.C.B. Top	9.25	63.51	
Gutter	9.9	63.0	
1/4	9.3	63.6	
1/2	9.2	63.7	
3/4	9.4	63.5	
Gutter	9.1	63.5	
N.C.B. Top	8.89	63.91	
			75' E of E.L. Calif
N.C.B. Top	5.05	67.81	
Gutter	5.6	67.3	
1/4	5.5	67.4	
1/2	5.5	67.4	
3/4	5.8	67.1	
Gutter	5.9	67.0	
S.C.B. Top	5.60	67.3	

Mc Kee St.

72.86

100 E of E.L. California

S Gutter 12 Driveway	2.31	70.55
"	1.8	71.1
✓ 1/2	1.7	71.2
"	1.6	71.3
Gutter	1.6	71.3
N.Cb Top	1.03	71.83
TP	12.64 84.99 0.51	72.35

125 E of E.L. Calif

N.Cb Top	9.20	75.79
Gutter	9.7	75.3
"	9.8	75.2
✓ 1/2	10.0	75.0
"	10.1	74.9
Gutter	10.4	74.6
S.Cb Top	9.98	75.01

150 E of E.L. Calif

S Gutter 12 Driv	6.65	78.34
"	6.3	78.6
✓ 1/2	6.1	78.8
"	6.1	78.8
Gutter	6.0	78.9
N.Cb Top	5.35	79.64

84.99

175 E of E.L. Calif

N.Cb Top	1.40	83.59
Gutter	2.0	83.0
"	2.1	82.9
✓ 1/2	2.2	82.8
"	2.3	82.7
Gutter	2.6	82.4
S.Cb Top	2.28	82.71
TP	9.43 93.90 0.52	84.47

199.6 E of E.L. Calif

S.Cb Top	7.14	86.46
Gutter	7.7	86.2
"	7.3	86.6
✓ 1/2	7.3	86.6
"	6.9	87.0
Gutter	7.0	86.9
N.Cb Top	6.47	87.43

209.6 E of E.L. Calif

N.Cb Top	4.98	88.92
Gutter on Pav	5.66	88.24
"	5.51	88.39
✓ 1/2	5.57	88.33
"	5.92	87.98
Gutter	6.40	87.50
S.Cb Top	5.93	87.97

72

McCree St.

93.90

N Gutter of Kethner Blvd

S. E. corner Paving		6.29	87.66
14		6.04	87.86
2		5.75	87.15
14		5.62	87.28
N. C. B.		5.52	87.38
TP	0.17	81.18	12.89
TP	0.04	68.51	12.71
TP	3.47	60.81	11.17
B.M.		8.28	52.53

N. E. B.P.  
Hedgerail  
C.H.  
52.51

8-15-34 Shoemaker - Updegraf, Woods.

B.M. 11+15 P. 21. 31c 1441

Hub on B.L. 5.28 279.43 274.15

BL+25E 8+66		3.6	275.8
8+54		1.7	277.7
8+40		1.5	277.9
8+37		2.6	276.8
A East 8+37		2.6	276.8
8+40		1.6	277.8
8+60		2.9	276.5
A+25E 8+66		3.8	275.6
8+38		1.7	277.7
8+36		2.4	277.0

73



Balbo Park - Swimming Pool Area.  
Line Change - Road Around Ball Grounds.

12/1/33

(Same)  
13+01.49 P.T. (North line of Road South of Pool)

13+55.83 P.C. Rt.

$$A = 3930R$$

$$T = 59.96$$

$$L = 115.13$$

$$R = 167.9$$

14+70.96 P.T.

18+47.33 P.C. Lt.

$$A = 20730L$$

$$L =$$

$$R = 343.49$$

$$\frac{30+91.31}{30+61.06} = \text{PT EQU.}$$

See page 2 Book 1479

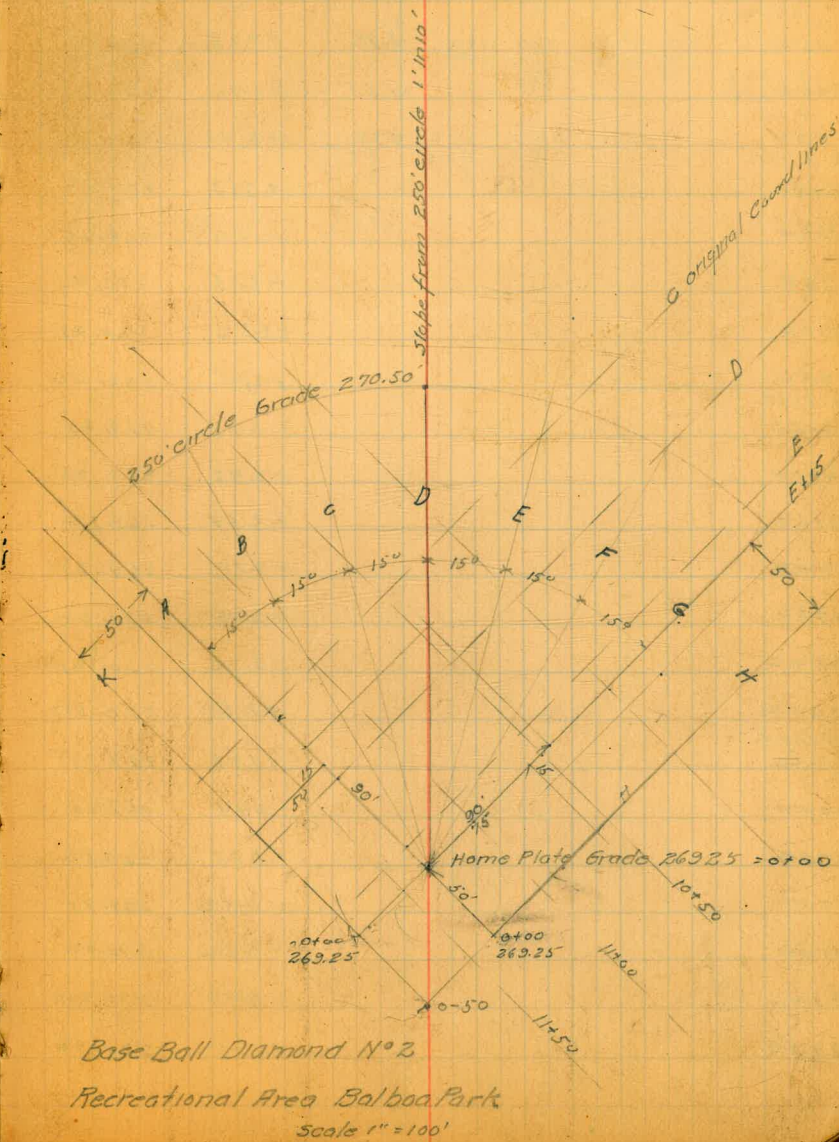
Levels taken Top of stakes Blued

Sta	+	HZ	Red.	Cut	Fill	Grade
A Line				+	-	
0+00	0.615	274.70	5.51	+0.63		269.25
+50			5.26	-1.60		269.50
1+00			5.01	-2.16		269.75
+50			4.76	-0.94		270.00
2+00			4.51	+0.17		270.25
+50			4.26	+2.20		270.50
B Line						
0+50						269.50
1+00				-1.38		269.75
+50				-0.71		270.00
2+00				+0.44		270.25
+50				+3.3		270.50
C Line						
0+50				-0.73		269.50
1+00				-1.47		269.75
+50				-0.05		270.00
2+00				+0.28		270.25
+50				+1.72		270.50
D Line						
0+50						269.50
1+00				-0.31		269.75
+50				+0.52		270.00
2+00				+0.57		270.25
+50				+2.29		270.50
E Line						
0+50				+0.18		269.50
1+00				-0.33		269.75
+50				+0.28		270.00
2+00				+1.20		270.25
+50				+2.15		270.50

All cut from top of stakes which are about .9' above ground

B.M. Elev 274.15 Sta 11+15 Base Line Book 1441-21  
Elev. Top of Culvert Headwall 267.54

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Ground Levels

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Sta	HI	-	Elev	BM
K 0+50	774.76	4.44	270.32	
0+00		6.98	67.78	
0+50		9.04	65.72	
1+00		7.30	67.46	
1+50		6.95	67.81	
2+00		5.88	68.88	
2+50		3.60	71.16	
A Line 0+00		5.53	69.23	
1+50		7.91	66.85	
1+00		7.90	66.86	
1+50		6.63	68.13	
2+00		5.31	69.45	
1+50		2.96	71.80	
B Line 0+50				
1+00		7.39	67.37	
1+50		6.36	68.40	
2+00		4.95	69.81	
2+50		1.61	73.15	
C Line 0+50		6.74	68.02	
1+00		7.23	67.53	
1+50		5.87	68.89	
2+00		5.15	69.61	
2+50		3.43	71.33	

Sta	*	H1	-	Elev
D Line 0+50		74.76		
1+00			6.23	68.53
+50			4.93	69.83
2+00			4.87	69.89
+50			2.83	71.93
E Line 0+50			5.82	68.94
1+00			6.16	68.60
+50			5.31	69.45
2+00			4.07	70.69
2+50			3.01	71.25
F Line 0+50				
1+00			5.32	69.42
+50			5.31	69.43
2+00			3.79	70.97
2+50			2.63	72.13
G Line 0+50			4.46	70.30
1+00			3.80	70.96
+50			3.22	71.54
2+00			2.36	72.40
+50			2.35	72.41
H Line 0+50				
0+00			3.62	71.14
+50			2.70	72.06
1+00			2.08	72.68
+50			2.46	72.30
2+00			3.04	71.72
+50			3.55	71.21

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## DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope  $1\frac{1}{2}$  to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

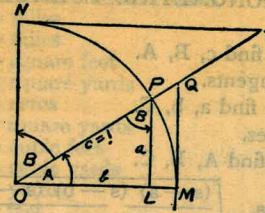


TABLE II

TRIGONOMETRIC FORMULÆ.

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

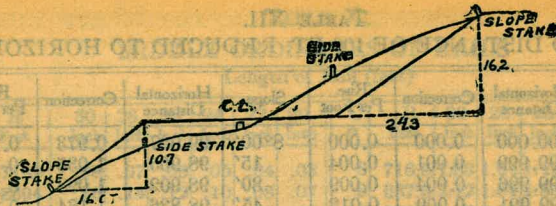
$$\sin \frac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \quad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Sines} \quad \frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$$



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.



Bundle's of Laths 1111 Stakes 11 Hubs 18

Elev. of Laurel St. Ext. -

15+56 - 148.51 \*1397 P.77

POT 38+00 35' L to Hub \*1355 79 "C"

39+50 " " \*1355 64 "A" 131.92

Ernst Mosiert - F2766

2055'

8" Bet X 2. Pipe line