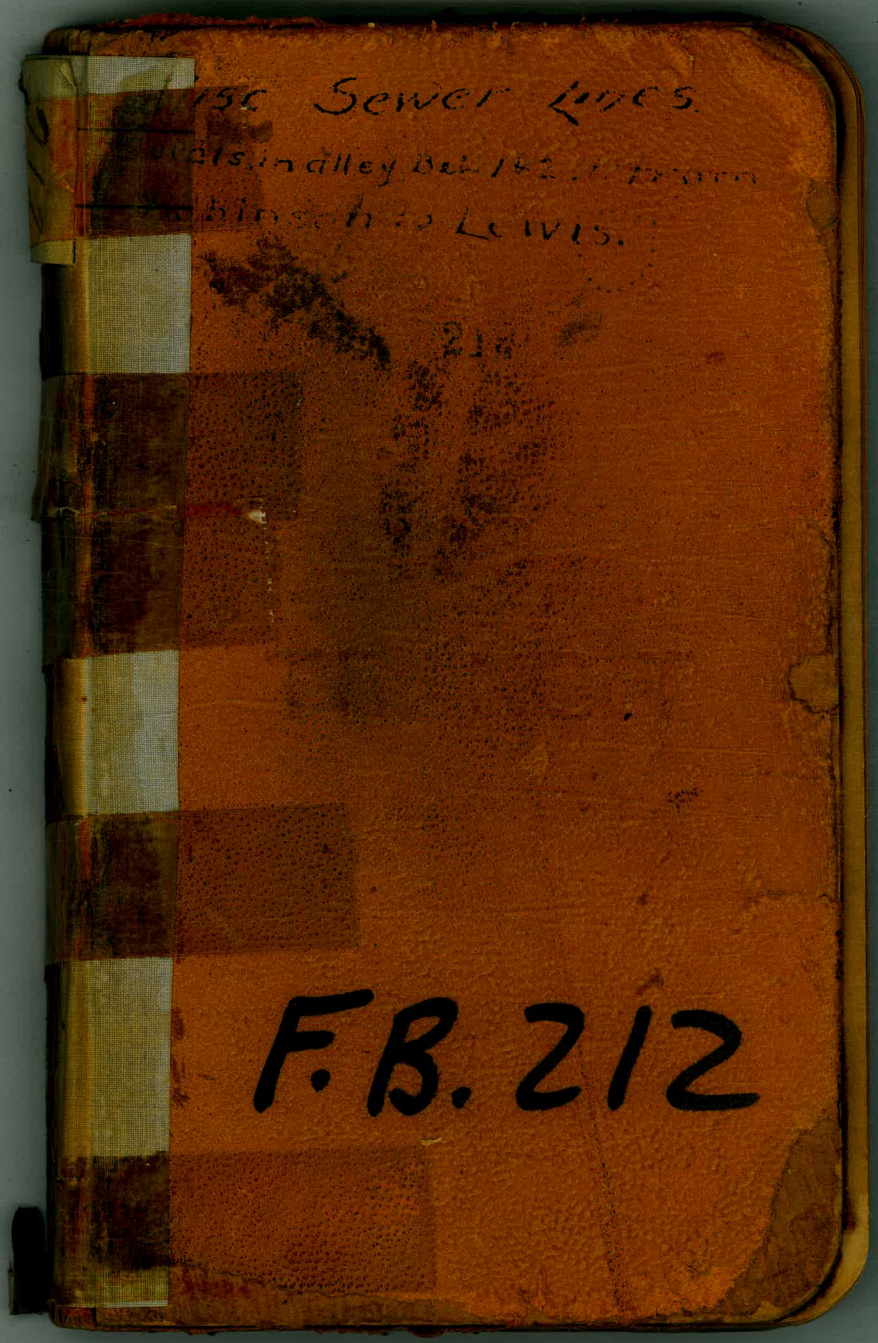

Sewer Lines.
Lewis.
F.B. 212

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Minutes	Lks.	Minutes	Lks.	Minutes	Lks.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

Return to City Engineers Office
City Hall, San Diego, Cal.

TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to, or taken from the slopes, to make one chain horizontal measurement.

MICROFILMED
DEC 8 1964

Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links
o		o		o		o	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

Return to City Engineers Office
City Hall, San Diego, Cal.

286.90
1.90
288.80
282.61
6.19
282.81
5.99
283.01
5.79
283.21
5.59

8.40
282.81
291.21
283.21
8.00
283.41
7.80
283.61
7.60
283.82
7.39
284.02
7.19
284.22
6.99
284.30
6.91

188.34 SW. Cor. 25 - D.
Nozzle of Hydrant

191.46 SW. Cor. 25 - C
Spk in Mast

191.46
1.34
192.80
184.62
8.18

184.67
0.68
185.29

X Section

G St 25th to 26th.	11-13
J " " " "	14-16
Storm Drain at 6th & L	25
Culvert on D at 14th	28

Sewers

Hawthorn St	2-3
So La Jolla	5-10
B St 24 to 25th	17-
23 St Extension	18-22
Alley bet 24 & 25 - M & N	23-24
Albatross Laurel - Maple	26
Alley bet Thornton & Cypress	27
" " 708 - Robinson & University Ave.	29

4/15/05 { Davis, Brooks, Shaw.

Hawthorn St. Sewer

		ϕ				Sta.	Grade
	0.19	173.02			172.83	-43	159.00
	4.15	170.51	6.66		166.36	-20	159.16
						0.0 = M.H. Ctr. of 2ND	159.31
						+27	159.49
						+40	159.58
						+50	
						+75	
						1	
						2	
						+80 = M.H. Ctr of 3RD	161.23

4 Dawes
22 Brooks
05 Shaw

Hawthorn St Survey

Sta	Rod	Ground	Grade		
	0.30	173.13			172.83
0+79		15	159.92		
TP	1.53	162.70		11.96	161.17
+88	3.87	158.83	159.98	1.15	
1+06	8.63	154.07	160.11	6.04	
1+24	11.26	151.44	160.24	8.80	
TP.		154.79		10.45	152.25
1+42	5.26	149.53	160.37	10.84	
1+60	7.03	147.76	160.50	12.74	
1+78	11.81	142.98	160.62	17.64	
1+96	11.40	143.39	160.75	17.36	
2+14	11.21 ?	143.58	160.88	17.30	
2+32	8.30	146.49	161.01	14.52	
2+50	2.13	152.66	161.14	8.48	
2+77			161.33		

Levels for Sewers in South La Jolla-Mid Page

Sta	+	I.H	−		
	5.94	90.50		84.56	B.M.- Spk in tel. pole on Palm Ave 150' No of S.L. La Jolla Park
T.P	3.73	92.98	1.25	89.25	
T.P.	3.02	91.89	4.11	88.87	
T.P.	2.23	86.91	7.31	84.68	
T.P.	3.70	84.56	6.05	80.86	
			5.59	78.97	=B.M. Rlg. No line of No Alley & W.L. La Jolla Blvd.
			7.31	77.25	" " " " 50 " " " " " " "

Levels over Ctr Line of No Alley from La Jolla Blvd to the Ocean.

		84.56			
0 = W.L. La Jolla Blvd.			5.75	78.8	
+50			7.45	77.2	
1			8.55	76.0	
+50			10.34	74.3	
T.P	0.70	75.35	9.91	74.65	
2			2.30	73.1	
+50			3.4	72.0	
3			4.4	71.0	
+50			5.6	69.8	
4			6.7	68.7	
+50			7.8	67.6	
5			9.0	66.4	
+50			10.0	65.4	
T.P.	-1.23	67.06	9.52	65.83	
6			2.9	64.2	
+50			4.0	63.1	
7			4.5	62.6	
+50			5.7	61.4	
8			6.6	60.5	
+50			7.4	59.7	

				8.5	58.6
9				7.95	59.11
T.P	1.64	60.75		3.50	57.3
9+50				4.6	56.2
10				6.8	54.0
+50				9.9	50.9
11 = E.L of Alley Running N.& S.				11.0	49.8
+07.5 Ctr. " " " "				11.43	49.32
T.P	0.62	49.94		6.5	43.4
11+50				12.55	37.3
12+00				12.08	37.86
T.P	0.52	38.38		5.2	33.2
12+50				9.65	28.7
13				9.75	28.6
+03				7.14 →	31.24
B.M. Plg at S.E Cor of Neptune Place & Westbourne Ave				12.7	25.7
+05				12.46	26.92
T.P.	0.46	26.38		8.9	17.5
13+15				11.8	14.6
+23				12.78	12.60
T.P.	0.77	14.37		2.55	11.9
+45					

		14.37			
13+50			4.3		10.1
+51			6.0		8.4
+69			7.2		7.2
+74			12.3		2.1
+98			11.4		3.0
+99			9.9		4.5
14+10			8.9		5.5
+26			11.8		2.6
+29	Water edge		16.0		- 1.6

Levels over Ctr. Line of South Alley
from La Jolla Blvd to the ocean

	0.97	78.22			77.25
0-W.L. La Jolla Blvd.			1.1		77.1
+50			2.6		75.6
1			3.9		74.3
+50			5.2		73.0
2			6.6		71.6
+50			7.8		70.4
3			9.1		69.1
+50			10.3		67.9
T.P.	1.15	69.82	9.55		68.67
4			3.1		66.7
+50			4.4		65.4
5			5.6		64.2
+50			6.8		63.0
6			7.9		61.9
+50			9.3		60.5
7			10.6		59.2
T.P.	0.93	60.88	9.87		59.95
+50			3.1		57.8
8			4.4		56.5
+50			6.0		54.9

9+00			8.6	52.3
+18			10.9	50.0
+50			9.1	51.8
10			9.0	51.9
+50			9.4	51.5
T.P.	1.08	53.17	8.79	52.09
B.M. on Pig at S.E. Cor of So Alley and alley running N+S			3.58 →	49.59
11 = E.L of Alley Running N+S			2.8	50.4
11+075 - Ctr " " " " "			2.86	50.4
+50			6.0	47.2
12			11.4	41.8
T.P.	0.47	41.44	12.20	40.97
+50			5.6	35.8
13			11.4	30.0
T.P.	1.35	30.46	12.33	29.11
+38			2.7	27.8
+40			5.8	24.7
+50			11.3	19.2
T.P.	0.38	18.09	12.75	17.71
+76			5.7	12.4
+84			9.8	8.3

T.P	0.79	6.11	12.77		5.32
14+00			1.7		4.4
+10			4.2		1.9
+50			6.5		−0.4
+85 - Water edge			9.4		−3.3

Levels over Neptune Place from North to South Lines of South La Jolla.
20' W. of E. Line.

6

	7.55	38.79		31.24	
+40 No of S.L. Westbourne			8.9	29.9	
+16			8.8	30.0	
+15			14.3	24.5	
+09			14.5	24.3	
+08			9.0	29.8	
+05			9.0 / 13.1	29.8 / 25.7	
00 - S.L. Westbourne			12.3	26.5	
+0.1			8.9	29.9	
+50			7.9	30.9	
1+00			7.2	31.6	
+50			7.0	31.8	
2			6.8	32.0	
+50			6.7	32.1	
3			6.7	32.1 =	c/r of Nautilus Ave.
+50			6.0	32.8	
4			5.7	33.1	
+50			4.4	34.4	
T.P.	1.26	36.24	3.81	34.98	
5			1.8	34 4	
+25			1.8	34.4	

36.2 W

+46			5.8	30.4
+50			8.1	28.1
+60			9.0	27.2
6+00			8.0	28.2
+45			10.1	26.1
+50			11.4	24.8
T.P.	0.13	24.77	11.65	24.59
+55			2.1	22.6
+64.5	S.L of So La Jolla		7.6	17.1
T.P	3.32	16.17	11.87	12.85
+75			3.7	12.45
+97			7.0	9.2
7+20		(24.72)	7 3	17.4

Levels over Ctr of Alley Running No & So. from No Alley to So Alley

	6.68	56.27		49.59
0=Sta 110.75 on No Alley Line			6.5	49.8
+50			5.3	51.0
1			5.2	51.1
+50			5.5	50.8
+64.7=Ctr of Natilus Ave			5.5	50.8
2 +00			5.1	51.2
+50			5.2	51.1
3			5.0	51.3
+32.25			5.95	50.3

Levels over center of property
Lines of "G" St. - 25th to 26th
6/3/85 { Dawg Brooks Taylor

	0.74	175.39		174.65
		E. line 25th		
S.L.			4.4	171.0
C			4.4	171.0
N.L.			2.6	172.8
		10' E 25th		
N.L			2.4	173.0
C			3.4	172.0
S.L			3.5	171.9
		25' E. 25th		
S.L			4.5	170.9
C			4.0	171.4
N.L.			3.0	172.4
		50' E 25th		
N.L.			4.8	170.6
C.			5.6	169.8
S.L.			6.5	168.9
		75' E 25th		
S.L			8.9	166.5
C			8.4	167.0
N.L.			7.0	168.4

		100' E 25th		
N.L.			10.9	164.5
C			10.4	165.0
S.L.			11.2	164.2
T.P.	1.50	164.16	12.73	162.66
		125' E. 25th		
S.L.			2.8	161.4
C			2.6	161.6
N.L.			3.6	160.6
		133' E 25th		
S.L.			4.0	160.0
		146' E 25th		
S.L			12.1	152.1
		158' E 25th		
N.L.			9.0	155.2
C			7.8	156.4
S.L.			13.7	150.5
T.P.	0.29	151.61	12.84	151.32
		175' E 25th		
S.L			4.8	146.8
C			2.4	149.2
N.L.			0.2	151.4

		200 'E 25th (151.61)		
N.L			3.7	147.9
C			6.5	146.1
S.L			9.0	142.6
		225 E 25th		
S.L.			12.4	139.2
C.			9.9	141.7
N.L.			6.6	145.0
		250 'E 25th		
N.L.			10.3	141.3
C.			13.8	137.8
T.P	1.70	141.28	12.03	139.25
S.L.			6.9	134.4
		275 E 26th		
S.L.			11.6	129.7
C			7.3	134.0
N.L.			2.9	138.4
		300 'E. 26th		
N.L.			8.9	132.4
T.P.	5.09	133.48	12.89	128.39
C			6.7	126.8
S.L.			11.1	122.4
		325 E 25th		
S.L			7.0	126.5
C			8.9	124.6
N.L			5.1	128.4
		350 E 25th		
N.L			5.9	127.6
C			6.3	127.2
S.L			4.3	129.2
		357 E 25th		
N.L.			6.4	127.1
		375 'E 25th		
S.L			0.9	132.6
C.			0.5	133.0
N.L.			2.3	131.2
T.P.	12.36	145.51	0.33	133.15
		400 E 25th		
N.L.			8.1	137.4
C.			8.3	137.2
S.L.			9.7	135.8

		(145.51)		
		425'E 25th		
S.L			4.8	140.7
C			3.4	142.1
N.L.			2.7	142.8
T.P	12.23	157.32	0.42	145.09
		450'E 25th		
N.L			8.5	146.8
C			9.3	148.0
S.L.			10.0	147.3
		475'E 25th		
S.L			4.6	152.7
C			3.9	153.4
N.L.			2.3	155.0
T.P.	12.57	168.85	1.04	156.28
		500'E 25th		
N.L			9.7	159.2
C.			10.8	158.1
S.L			10.8	158.1
		525'E 25th		
S.L			6.8	162.1
C			6.0	162.9
N.L			4.3	164.6

T.P.	10.13	178.15	0.83	168.02
		550'E 25th		
N.L.			8.2	170.0
C			9.5	168.7
S.L.			10.2	168.0
		564 E of 25 = W.L. 26th		
S.L			7.6	170.6
C			6.0	172.2
N.L			4.2	174.0
Chk B.M 26 & F Plg 13'S & W of Ctr.			4.19	173.96

Levels over center & property lines of J St from 25th to 26th

6/3/05 { Davis. Brookes. Taylor.

	1.95	103.99			102.04
	E. line 25th				
S.L.			3.9		100.1
C			3.1		100.9
N.L.			1.6		102.4
	3' E of 25th				
S.L.			5.9		98.1
N.L.			0.2		103.8
	25' E of 25th				
N.L.			0.7		103.3
C			4.4		99.6
S.L.			7.3		96.7
	50' E of 25th				
S.L.			8.0		96.0
C			5.4		98.6
N.L.			1.2		102.8
	75' E of 25th				
N.L			1.7		102.3
C			5.5		98.5
S.L.			9.0		95.0

		100 E of 25th			
S.L.			9.8		94.2
C			6.6		97.4
N.L.			3.2		100.8
		125' E of 25th			
N.L.			5.0		99.0
C.			8.2		95.8
S.L.			10.5		93.5
		150' E of 25th			
S.L			11.6		92.4
C.			9.7		94.3
N.L.			7.3		96.7
		175' E of 25th			
N.L.			9.5		94.5
C			11.0		93.0
S.L			12.9		91.1
T.P.	8.79	99.87	12.91		91.08
		200' E of 25th			
SL.			10.2		89.7
C			8.5		91.4
N.L.			7.0		92.9

6/8/05 {Davis Brooks Haslam

		(99.87)		
	215 E of 25th			
S.L		11.8		88.1
	225 E of 25th			
N.L		8.5		91.4
C		9.7		90.2
S.L		11.1		88.8
	245 E of 25th			
N.L		10.3		89.6
C		10.9		89.0
	250 E of 25th			
S.L		9.7		90.2
C		9.5		90.4
N.L		8.5		91.4
	275 E of 25th			
N.L		5.6		94.3
C		6.5		93.4
S.L		6.4		93.5
	300 E of 25th			
S.L		2.6		97.3
C		1.9		98.0
N.L		1.5		98.4
T.P	12.42	111.92	0.37	99.50
	325 E of 25th			
N.L		7.4		104.5
C		6.4		105.5
S.L		9.0		102.9
	350 E of 25th			
S.L		3.0		108.9
C		1.7		110.2
N.L		1.0		110.9
T.P	12.19	123.15	0.96	110.96
	375 E of 25th			
N.L		7.6		115.6
C		7.9		115.3
S.L		9.8		113.4
	400 E of 25th			
S.L		5.6		117.6
C		3.9		119.3
N.L		2.8		120.4
T.P	11.57	134.37	0.35	122.80

		℄			
		134.37			
		425 E of 25th			
N.L.			11.50	122.9	
C.			11.2	123.2	
S.L.			14.0	120.4	
		450 E of 25th			
S.L.			12.3	122.1	
C.			10.5	123.9	
N.L.			8.6	125.8	
		475 E 25th			
N.L.			6.4	128.0	
C.			8.0	126.4	
S.L.			9.7	124.7	
		500 E of 25th			
S.L.			8.6	125.8	
C.			5.5	128.9	
N.L.			3.3	131.1	
T.P.	6.19	139.22	1.34	133.03	
		525 E of 25th			
N.L.			5.5	133.7	
C.			8.9	131.3	
S.L.			11.5	128.7	

	560 W.L. 26th		
S.L.		7.9	131.3
C.		5.7	134.0
N.L.		2.0	137.2

Levels for Sewer in "B" St 24 to 25

X 6/14/05 { Davis, Brooks, Haslam

Sta	Rod	Ground	Grade	±
0 = M.H. Ctr. 24th	11.60	180.64	172.00	+8.64
+25			173.83	
+50	10.12	182.12	175.65	+6.47
+75			177.48	
1	7.03	185.21	179.31	+5.90
			181.13	
+50	3.48	188.76	182.96	+5.80
			184.79	
2	0.29	191.95	186.61	+5.34
			188.44	
+50	7.93	195.13	190.27	+4.86
+60 = F.T.	7.14	195.92	191.0	+4.92
3+70 = FT	4.60	198.46	192.50	+5.96
+50	4.46	198.60	192.38	+6.22
3	4.70	198.36	192.07	+6.29
+50	5.12	197.94	191.76	+6.18
2	5.49	197.57	191.46	+6.11
+50	6.00	197.06	191.16	+5.90
1	6.37	196.69	190.85	+5.84
+50	6.73	196.33	190.54	+5.79
0 = M.H. Ctr 25th	6.93	196.13	190.24	+5.89

+7.3077

12.45	192.24		179.79
11.11	203.06	0.29	191.95

197.49
4.69
202.18 H.I.

1+50 =	191.16 =	11.02
+75	91.31	10.87
2+	191.46	10.72
+25		10.57
+50	191.76	10.42
		4.25
		6.17

Grades set from 1+50 - 2+50 = 7/20/05
Hutchison
Evans
Sawyers

Extension of 23rd St Sewer

D

					Sta	Rod	Ground	Grade	±
	0.28	180.07		179.79					
	6.70	173.86	12.91	167.16	0+Old F.T. 11723	9.9	164.0	159.00	+5.0
					+25			159.19	
					+50	10.4	163.5	159.38	+4.1
					+66.3=M.H Ctr 23rd	10.1	163.8	159.50	+4.3
					1+00	8.5	165.4	161.55	+3.9
					+25			163.07	
	2.96	182.75		179.79	+50	3.6	170.3	164.59	+5.7
					+75			166.11	
					2	7.0	175.7	167.64	+8.1
					+25			169.16	
					+50	2.6	180.2	170.68	+9.5
					2+71.7=M.H Ctr 24th	2.1	180.7	172.00	+8.7
					3+00	2.9	179.9	172.15	+7.8
					+25			172.28	
					+50	3.2	179.6	172.41	+7.2
					+75			172.54	
					4	4.1	178.7	172.67	+6.0
					+25			172.81	
					+50	4.8	178.0	172.94	+5.1
					+62=M.H	4.9	177.9	173.00	+4.9
					+75			173.07	

						Sta.	Rod	Ground	Grade	±
		182.75				5	5.6	177.2	173.20	+4.0
						+25			173.33	
						+50	6.7	176.1	173.46	+2.6
						+75			173.59	
						6	7.2	175.6	173.73	+2.0
						+25			173.86	
						+52=M.H.	6.9	175.9	174.00	+2.0
						+75			175.11	
T.P.			2.31		180.44	7	4.6	178.2	176.33	+2.0
						+25			177.54	
						+50			178.75	2.8
						+75			179.96	
						8			181.17	2.8
						+25			182.39	
						+50			183.60	7.2
						+75			184.81	
						9			186.02	4.5
						+25			187.24	
						+42			188.06	5.1
						+75			~~189.66~~	
						+82=M.H.			190.0	5.6

Sta	Rod	Ground	Grade	±
9+92			190.18	6.0
+25				
10+42			191.09	7.6
+75				
10+92			191.99	8.2
+25				
11+42			192.90	7.5
+75				
11+92			193.80	6.9
+25				
12+42			194.71	6.3
F.T. +58.3			195.0	6.2

23d St. Extension Sewer

7/6/05

B.M.	0.51	180.30		179.79	
	4.15	171.55	12.90	167.40	
0+00	Old Flush Tank		12.55	159.0	
+50			12.17	159.38	0.76%
+66 3	MH ℄ 23d st. & B.		12.05	159.50	
1			10.00	161.55	
	12.78	177.37	6.96	164.59	6.085%
2			9.73	167.64	
			6.69	170.68	
+71 1	MH ℄ 24th St. & B.	185.07	5.37	172.00	
3			12.92	172.15	
			12.66	172.41	
4			12.40	172.67	
			12.13	172.94	0.526%
+62	1.92 MH.	181.71	8.71	179.79 173.00	
5			8.51	173.20	
			8.25	173.46	
6			7.98	173.73	
+52	MH. 24th & A		7.71	174.00	
7			5.38	176.33	4.848%
+50	12.60	191.35	2.96	178.75	

12605
178745
191.35

159
13
172

17979
1.92
181.71

17979
5.28
185.07
173
12.07

6085
7
.42595

6085
15
30425
6085
.91272

16764
93
167.21
177.37
10.16

17068
169.77
17737
7.60
6.69
.91

17200
169.77
2.23
11.03
13.26

7/10/05

7/6/05

23d St. Extension Sewer

		191.35				
8			10.18	181.17	✓	0.84
			7.75	183.60	✓	8.4
9			5.33	186.02	✓	
+42			3.29	188.06	✓	
+82	13.21 FH.	203.21	1.35	190.00	✓	✓
+92			13.03	190.18	✓	
10+42			12.12	191.09	✓	
+92			11.22	191.99	✓	0.91
11+42			10.31	192.90	✓	
+92			9.41	193.80	✓	
12+42			8.50	194.71	✓	
+58 3			8.21	195.00	✓	

7/6/05

7/10/05

282
652
380

1258
982
276

Levels over East & West Alleys bet 24th & 26th - M & N. 9/9/15 {Davis, Brooks, Haslam

	3.15	58.90			55.75
0 = E.L. 24th			7.5	51.4	
+50			7.2	51.7	
1			6.6	52.3	
+38			7.1	51.8	
+44			8.0	50.9	
+50			8.0	50.9	
2			6.8	52.1	
+50			5.1	53.8	
3			4.4	54.5	
+50			4.5	54.4	
4			4.1	54.8	
+50			3.1	55.8	
5			2.4	56.5	
+50			1.8	57.1	
6 = W.L. 25th			2.1	56.8	
T.P.	8.35	64.55	2.70		56.20
0 = E.L. 25th			8.0	56.5	
			5.6	59.0	
+50			5.4	59.2	
1			5.5	59.1	
+50			5.4	59.2	

64.55

2	6.3	58.3
+46	7.3	57.3
+50	7.0	57.6
+58	6.3	58.3
+82	5.6	59.0
3	5.7	58.9
+50	5.2	59.4
4	5.3	59.3
+31	3.7	60.9
+50	4.3	60.3
5	4.4	59.9
+55	4.1	59.5
+60 = W.L. 26th	3.4	61.2

Levels over North & South
Alley bet. 25 & 26 - M & N. 9/9/05 { Davis / Brooks / Haslam

6

		∅ 64.55			
0 = S.L. M. St.			{5.0 / 1.3		59.6 / 63.3
+50			2.6		62.0
1			4.0		60.6
+50			5.4		59.2
2			7.0		57.6
+50			8.9		55.7
+90			11.0		53.6
3 = No line "N" St			12.7		51.9

Levels & Grades for Drain from 6th J L to the Bay

10/13/05 { Davis, Wet, Thomas

		H.I.			
	2.71	6.68			3.97
Sta	Rod	Ground	Grade	±	
0	4.41	2.27	-0.73	+3.00	
+50	4.53	2.15	-1.08	+3.23	
1	5.21	1.47	-1.42	+2.89	
+50	4.82	1.86	-1.77	+3.63	
2	5.18	1.50	-2.11	+3.61	
+50	5.79	0.89	-2.46	+3.35	
3	5.51	1.17	-2.81	+3.98	
+32	5.64	1.04	-3.03	+4.07	
+50	5.31	1.37	-3.15	+4.52	
+60	5.74	0.94	-3.22	+4.16	

Plat by E L B

H.I.

3.95 7.92 3.97

6.44
1.48
1.42
2.94

7.92
1.08
9.00

7.92
1.35
9.27

7.92
.90
8.82
5.19
3.63

Levels over Ctr Line Albatross from Laurel to Maple 10/14/05 Davis Brooks Haslam

	0.21	209.80			209.59
	0.97	198.13	12.64		197.16
	3.15	189.23	12.05		186.08
-40 Ctr Laurel			5.7		183.5
0 = No line Laurel			6.8		182.4
+25			7.1		182.1
+50			8.0		181.2
+75			7.8		181.4
1			8.5		180.7
+25			8.7		180.5
+50			8.7		180.5
+75			9.0		180.2
2			9.4		179.8
+25			9.5		179.7
+50			9.4		179.8
+75			9.3		179.9
3			9.5		179.7
+40			10.1		179.1

Plat by E.L.B

S.E Cor Laurel & Front - Top Stone post

Levels over Ctr. line of Alley bet Thornton & Cypress - Vermont & Main

			B.M. Tack, Pole N.E Cor Vermont & Thornton		287.03
	2.43	289.46			
-40- Ctr Vermont			5.6	283.9	
0- E. Line			5.2	284.3	
+50			4.6	284.9	
1			4.0	285.5	
+50			2.9	286.6	
2			2.8	286.7	
+50			2.2	287.3	
3			1.7	287.8	
+50			1.1	288.4	
4			1.4	288.1	
T.P	0.29	288.81	0.94		288.52
+25			1.5	287.3	
+39			4.1	284.7	
+50			9.9	276.9	
T.P	1.05	277.37	12.49		276.32
+75			9.0	268.4	
+91			12.9	264.5	
T.P	0.81	265.36	12.82		264.55
5			4.3	261.1	
+23			11.7	258.7	

265.36

5+25			11.0	254.4	
+50			2.1	263.3	
T.P	12.9.1	277.77	0.50		264.86
+75			3.9	273.9	
T.P.	11.36	288.87	0.26		277.51
+87			10.0	278.9	
+91			9.5	279.4	
6+0- W.L Main			3.2	285.7	
+40- Ctr			0.0	288.9	

10/25/05 { Davis
Wetmore
Thomas

Stakes for Culvert across "D" at 14th

Ht.
100.00 assumed

6.00
94.00 grade so end

5.00
95.00 grade no end

	Grade	Rod
0	94.00	6.0 ✓
+12	94.2	5.8 ✓
+24	94.4	5.6 ✓
+36	94.6	5.4 ✓
+48	94.8	
+60	95.0	5.0 ✓

Leads in alley 8 set 7 & 8 - ~~Thornton~~
Robinson to Univ.

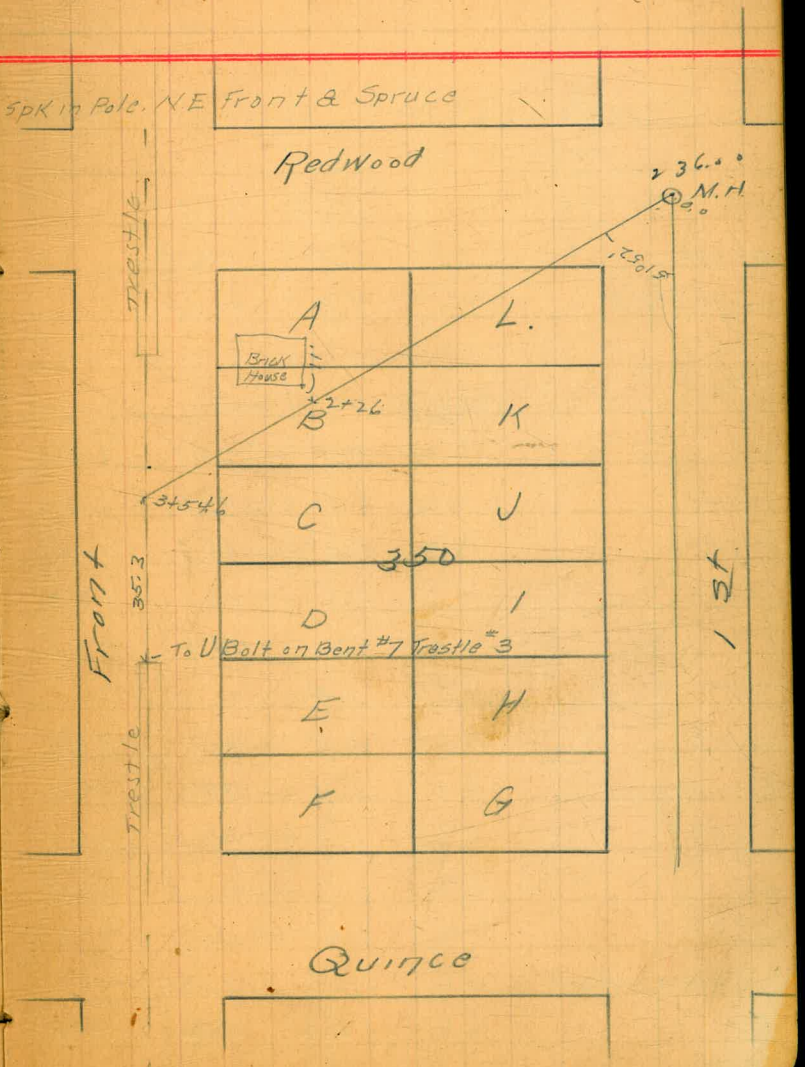
Levels over center line of Alley
bet 7 & 8th Robinson & University
11 Lewis
23 Barbs
05 Hasbrun

	4.67	288.92			284.25
12.8' S. of Ctr Univ Ave			4.6	284.3	
0 = So Line "			5.0	283.9	
+50			6.1	282.8	
1.			6.8	282.1	
+50			7.3	281.6	
2			7.8	281.1	
+50			8.3	280.6	
3			8.7	280.2	
+50			9.2	279.7	
4			10.1	278.8	
+25			11.5	277.4	
+44.5			12.4	276.5	

Levels for Sewer across Block 350
Hortons Addition 1/20/06 { Davis, Evans, Moore

POSTED

	8.68	245.92			237.24
00 = Ctr Redwood & 1st			3.0		242.9
+50			4.7		241.2
+87			6.2		239.7
1+50			9.0		236.9
T.P.	1.20	238.11	9.01	236.91	
2			4.2		233.9
+26			4.7		233.4
+50			5.4		232.7
+95			7.4		230.7
T.P	0.75	229.22	9.64	228.47	
T.P	6.85	228.23	7.84	221.38	
3+54.6 = Connection with Front St Sewer			2.3		225.9



Levels for Pipe Line.. POSTED

X SD&G&E Co. Works

3/8/06 { Hatch, Brooks, Butler

953
917
3.6

	4.50	104.50		100	95.33
	1.84	98.99	7.35	97.15	
Base of Rail			3.52	96.47	
≠ 600'			11.0	87.99	
High Tide			7.3	91.69	
	4.56	104.56		100.	
0			4.9	99.7	95.33
+50			5.0	99.6	94.7
+90			5.3	99.3	94.1
1+50			5.5	99.1	93.3
2			5.6	99.0	92.6
T.P.	5.55	102.70	7.41	97.15	
+50			4.5	98.2	91.9
3 angle.			5.7	97.0	91.2
+50			5.7	97.0	90.5
4			5.9	96.8	89.8
+50			6.5	96.2	89.1
Base of Rail			7.05	95.65	
5			10.6	92.1	88.4
T.P.	3.85	94.75	11.80	90.90	

1.40%

954
88
7.4

954
845
11

88
845
3.5
44
1.1

4.53
3.65
.88

493
180
3.65

9577
9533
44

953
917
3.6

8.3
460

Cut for Pipe	Grade for Drain	Cut
4.3	97.0	2.7
4.9	96.47	3.1
5.2	96.05	3.2
5.8	95.41	3.7
6.4	94.88	4.1
6.3	94.35	3.8
5.8	93.82	3.2
6.5	93.29	3.7
7.0	92.76	4.0
7.1	92.23	4.0
	92.6	3 — below base of Rail
3.7	91.7	0.4

Rate 1.06%

		94.75				
+30			6.1	88.7	89.7	1.0
6			7.3	87.5	87.0	0.5
			7.7	87.1		
7			8.1	86.7		
			8.5	86.3		
8			8.8	86.0		
			9.1	85.7		
9			9.2	85.6		
			9.5	85.3		
10			9.7	85.1		
			10.0	84.8		
11			10.3	84.6		
	8.25	101.40		97.15		
water level			9.15	91.25		

495
178
12.75
464
8.1

417
414
.83

95.33
82.5
12.83 left to end of pipe

95.33
83
12.33 left at 1500'

953
84.5
10.8

8.75 82.50 end of pipe
8.25 83.0 1500'

POSTED

3/8/06 {Hatch, Brooks, Butler}

248 ft total length

Sewer Grades at SDE Ry Co. Power House –

	3.49	11.37	11'-4½"		(1	
1042	5.61	3.49	10'-5"		(2	
561	2.12	14.86				
16.03		16.03				
		1.17				
	1486	114.86		100 –		
Lower.			16.03	98.83	98.83	
+50			5.60	109.26	99.06	10.20
1			5.57	109.29	99.30	10 –
+50			5.54	109.32	99.54	9.78
+80			5.47	109.39	99.68	9.71
2			4.56	110.30	99.77	10.53
+48 MH.			14.86	100 –	100 –	

117 | 248
992 | 471
1780 | 235
1736
440

471
30
14130

471
68
3768
1884
22608

0942
68
77

9954
14
68

9883
235
99.065
235
99300
235
99535
235
99770
1226
99996

10932
9954
9.78

109.26
9906
10.20

10929
9930
10.

109.39
9968
971

110.30
9977
1053

10 Hg Sq N.					
BM	1.89	10.21		8.32	
	3.79	7.88	4.12	4.09	
top of S.R. at line			6.25	1.63	
base " " "			6.65	1.23	= 9566
10 Hg Sq N.					
BM	1.96	10.28		8.32	
	4.76	10.02	5.01	5.27	
Floor - at S.			4.25	5.77	1000
well -			5.10	4.92	
	3.67	8.94		5.27	
			7.25	1.66	
top of Rail	0.37	1.97		1.60	
top of well			12.2	-10.2	11.5
100 out			15.8	-13.8	15.1

5.89
1.23
4.66

1.00
0.65
4.35

5.98
4.66
+ 1.32 - El Condenser Pit
10.2
11.5

12.8

10.2
2.6
12.8

15.8
2
18.8
1.3
16.1

13.8
1.3
15.1

5.89 El of Floor at W.
4.92
9.7

depth of water

diff 2.6 14.1 —
(3.8)

Sewer in Vermont Street

From Alley North to Alley South of Pennsylvania

POSTED

Mar. 16, 1906

{Shields
Haslam
Hawk

35

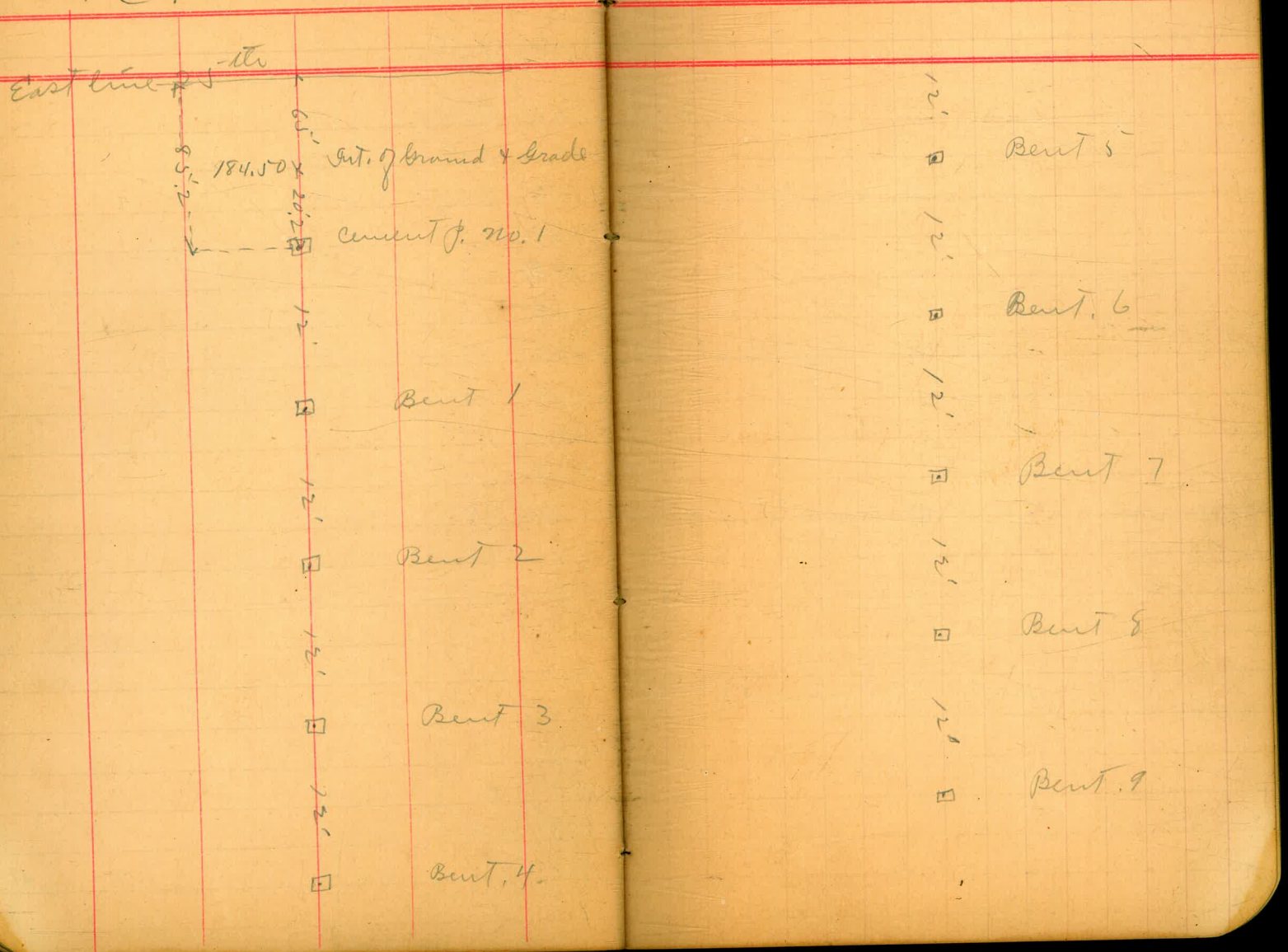
Sta			Grade	H.I.	Rod	Elev.	cut
0+00	M.H. 148		281,0	290.30	5.5	284.8	3,8
+50			281.20		5.6	284.7	3.5
1 +00			281,40		5.5	284.8	3.4
+50			281,60		5.7	284,6	3.0
+90 & Penn. Ave			281.76				
2			281,80		6.9	283.4	1.6
+50			282,01		8.0	282.3	0.3
3			282,21		6.8	283.5	1.3
+50			282,41		6.5	283.8	1.4
+80	M.H.	angle.	282,53		6.5	283.8	1.3
4			282,61		6.3	284.0	1.4
+50			282,81		5.64	284.66	1.9
5			283,01	291.32	6.2	285.1	2.1
+50			283,21		5.6	285.7	2.5
6	M.H.		283,41		5.1	286.2	2.8
+50			283,61		4.7	286.6	3.0
7			283,82		4.2	287.1	3.3
+50			284,02		3.2	288.1	4.1
8			284,22		3.2	288,1	3,9
+20	F.T.		284,30		3.4	287.9	3.6

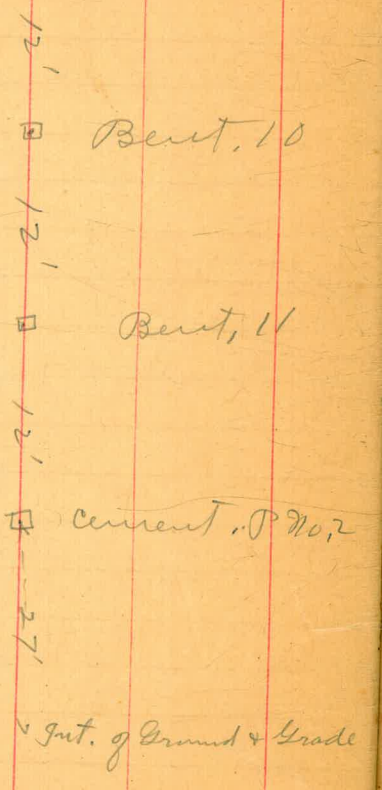
Mar. 16. 1906

Childs
Haslam
Hawkins

36

X Trestle in alley bet. 25th & 26th
bet. C & D





186.36 ∠ Int. of Ground & Grade

Levels on Trestle Bents

Bent.	Grade	H.I.	Rod.	
Con.P. no.1	[illegible]	194.16	11.61	182.55
1			12.63	181.53
2		194.38	9.13	180.25
3			10.30	179.08
4			11.42	177.96
5			10.39	178.99
6			9.69	179.69
7			9.10	180.28
8			9.02	180.36
9			8.63	180.75
10			7.77	181.61
11		194.16	11.57	182.59
Con.P. no.2	[illegible]		10.37	183.79

23rd Street Sewer bet. A & B.

POSTED

May 21 1906

{Shields Haslam Hawkins

39

Sta.			Grade	H.I	Rod	Elev cut.
0+00			159.80	169.91		
+50			160.10			
1			160.41			
+50			160.71			
2			161.01			
+50			161.32			
+80			161.50			
3+00			161.62			
+20			161.74			

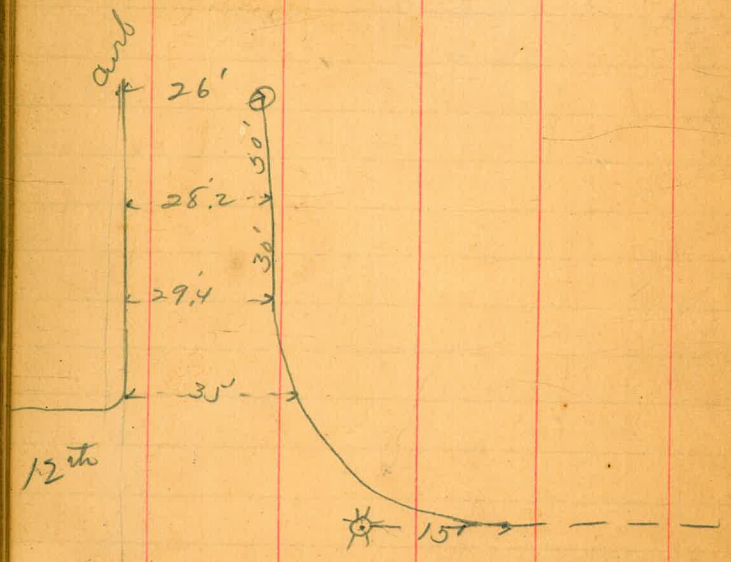
L

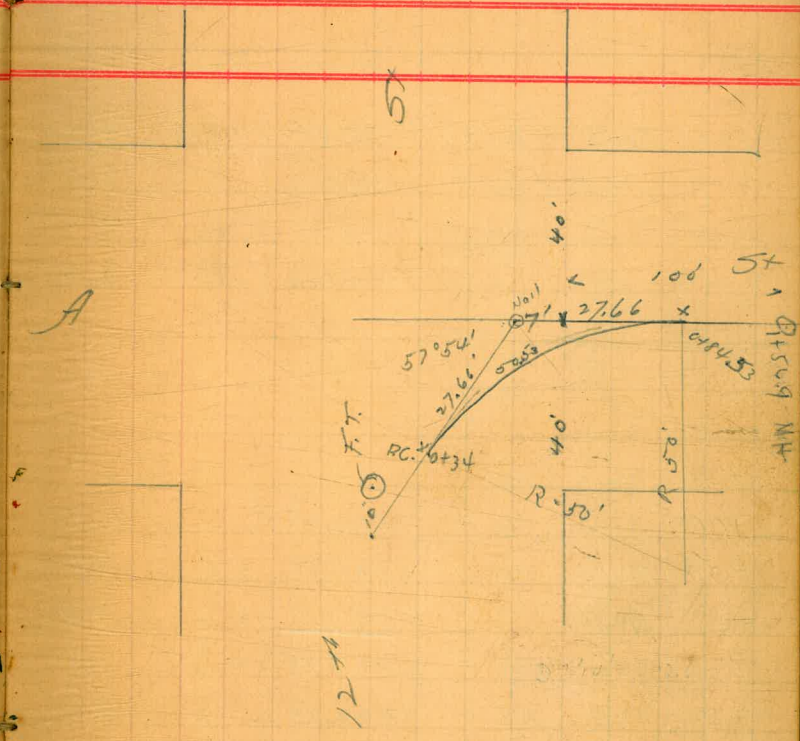
Plan of Sewer - 12th & A. 4/11/06 { Dean, Brooks, Thorne

POSTED

40

Sta.		Grade
1+65	M.H.	106
1+15		103.78
+85		102.46
+60		101.35
+35		100.25
0.0	T.T.	98.70





Sewer bet. 25th & 26th Bdwy & C

5/4/06 {Lamp Beasley Fontaine}

Sta			Grade	H.I.	Rod	Elev.	cut
0+00	M.H. center 25th		183.55	198.85	9.3	189.5	6.0
+50	E. line 25th		184.02		9.5	189.3	5.3
1+00			184.48		13.9	184.9	0.4
+15			184.62		14.4	184.4	−0.2
	Trestle						
3+06			186.40		12.3	186.5	0.1
+50	M.H.		186.81		8.8	190.0	3.2
+70	M.H.		187.0		7.4	191.4	4.4
4+00			187.95		5.7	193.1	5.2
+50			189.54		3.6	195.2	5.7
5+00			191.13		1.02	197.83	6.7
+50			192.73	204.63	4.7	199.9	7.2
+90	F.S.		194.0		4.4	200.2	6.2

Trestle grades set 4/8/06
Hatch meinte

	H.I.		B.M.
	4.74	193.08	188.34
	184.02	184.48	184.62
	9.06 v	8.60 v	8.46 v
	10.95	197.83	6.20 186.88
	186.40	186.81	187.00 187.95
	11.43 v	11.02 v	10.83 v 9.88 v
	189.54	191.13	192.73 194.00
	(8.29 v)	6.70 v	5.10 3.83
		185.29	
2			0.60 184.69
3		(1 below)	2.49 184.80
1	3.45	v 3.53	181.46 184.91
2	4.48	v 4.96	180.53 185.01
3	4.94	v 5.11	180.18 185.12
4	5.96	v 5.92	179.37 185.23
5	5.45	v 5.40	179.89 185.34
6	5.45	v 5.29	180.00 185.45
7	4.96	v 4.70	180.59 185.55
8	4.96	v 4.59	180.70 185.66
9	4.96	v 4.48	180.81 185.77
10	3.95	v 3.36	181.93 185.88
11	3.0	v 2.30	182.99 185.99
3	(1 below)	0.2	186.09
2	(1 below)		186.20

Levels center alley between 1st & 2d St from Robinson to Lewis

F.P.C
Evans
Moore

Blks 1-7-4
Florence Hts POSTED

BM	Spike in Pole		SW	for Robin & 2d
	2.30	277.58		275.28
N L Robinson			4.5	273.1 on Manhole
+50			2.7	274.9
1			2.3	275.3
TP	6.18	281.40	2.26	275.32
+50			5.5	275.9
2			5.5	275.9
+50			7.0	274.4
3			6.0	275.4
+50			4.0	277.4
4	So Line University ave.		3.8	277.6 South University ave
+40	Cr.		4.4	277.0
+80	N. Line Un. ave.		3.8	277.6 North Line Ave
+50			2.8	278.6
1			2.5	278.9
+50			3.4	278.0
TP	3.85	281.98	3.27	278.13
+80			4.0	278.0
2			9.0	273.0
TP	0.37	269.91	12.44	269.54
+25			7.7	262.2

TP	3.09	261.33	11.47	258.44	
+50			6.4	255.1	
+65			12.3	249.2	
+75			8.0	253.5	
3			0.7	260.8	
+10			0.2	261.3	
+25			3.5	258.0	
+40			10.3	251.2	
+50			6.6	254.9	
+75			1.4	260.1	
TP	12.12	272.47	1.18	260.35	
4			3.0	269.5	
TP	11.48	283.33	0.62	271.85	
+25			4.4	278.9	
+50			2.7	280.6	
5			2.1	281.2	
+60	S. Line Wash St.		1.0	282.3	S Line Wash St
608	N. Line Wash St.		1.1	282.2	N Line Wash
TP	7.50	289.78	1.05	282.28	
0+50			7.3	282.5	
1			7.0	282.8	

750		289.78	6.6	283.2
1			5.6	284.2
750			4.9	284.9
3			4.9	284.9
750			4.4	285.4
4			4.4	285.4
750			3.5	286.3
5			3.5	286.5
750			3.	286.8
6			2.5	287.3
740	S. Line Lewis		2.5	287.3

1st & Rob S. E. bar 269.33
1 & Unio S E bar 274.32 [illegible]
2 & Unio S E bar 280.52 " "

bar
car

Levels for Sewer in Alley between Albatross & 1st St. from Robinson to Lewis St.

Clough
Evans
Taylor

May 1st

POST

				℄		
	2.92	278.20	[illegible]	275.28	BM	SW Cor 2nd & Robinson spike in Pole
TP	6.19	274.79	9.60	268.60		
0			6.2	268.6		N Line Robinson
+50			5.2	269.6		
1			5.0	269.8		
+50			6.2	268.6		
2			6.9	267.9		
+50			8.5	266.3		
3			10.0	264.8		
TP	0.36	262.41	12.74	262.05		
+20			2.3	260.1		
+50			11.2	251.2		
TP	5.25	254.76	12.90	249.51		
4			12.5	242.3		S Line University
+10			13.5	241.3		
+30			12.8	242.0		
+50			11.6	243.2		
+80			7.3	248.5		N Line University
5			2.0	252.8	or 256.8	
+25			-2.0	252.8		
TP	7.37	257.92	4.21	250.55		

416

		257.92			
5 +50			7.6	250.3	
TP	0.80	246.07	12.65-	245.27	
+75			6.2	239.9	
6			12.6	233.5	
+17			17.0	229.1	
+25-			14.8	231.3	
+50			5.3	240.8	
T.P.	12.60	258.51	0.16	245.91	
+75-			9.6	248.9	
TP	11.85-	270.07	0.29	258.22	
7			9.	261.1	
TP	10.86	280.22	0.71	269.36	
+25-			8.3	271.9	
+50			6.6	273.6	
8			5.5-	274.7	
+50			3.9	276.3	
9			2.9	277.3	
+50			2.2	278.0	
10			1.0	279.2	
TP	6.17	285.34	0.89	279.17	
+40			5.8	279.6	

560
30
636
653.6

S Side Washington St

	≈85.50			
11			5.3	280.2
+50			5.0	280.5
12			4.4	281.1
+50			3.4	282.1
13			2.8	282.7
+50			2.0	283.5
14			1.6	283.9
+50			1.1	284.4
15			0.8	284.7
TP1	5.73	≈90.29	0.94	≈84.56
+50			5.3	285.0
16			4.9	285.4
+50			4.5	285.8
17			4.0	286.3
+40			4.5	285.8

N Side Washington St

S Side Lewis

X

Columbia Street Juniper

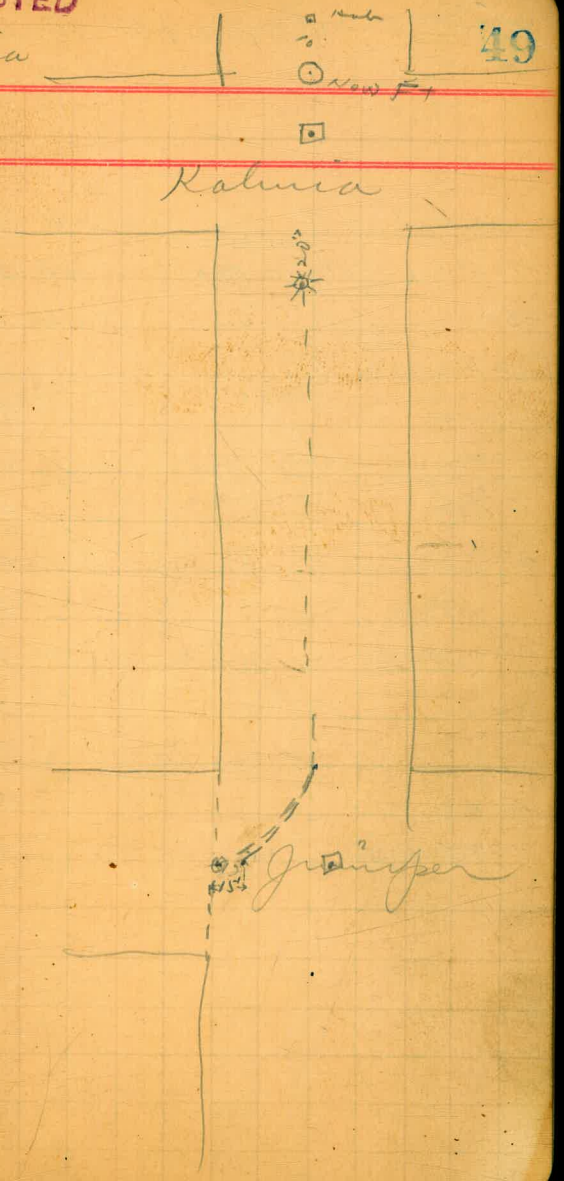
POSTED

To Kalmia

Sta.		Grade	H.I.	Rod	Elev.	Cut
0+00	F.I.	58.0	68.72	5.1	63.6	5.6
+50		57.24		4.8	63.9	6.7
1+00		56.47		4.6	64.1	7.6
+50		55.71		4.2	64.5	8.8
2+00		54.94		4.2	64.5	9.6
+50		54.18		4.1	64.6	10.4
+81.35		53.70		4.0	64.7	11.0
3+08.25		53.29		4.4	64.3	11.0
3+31.75		52.93		4.7	64.0	11.1
3+46.75		52.7				

Note - Length of Sewer is 378.5' from F.I. 20' So of S.L. Kalmia.

See New grades Next Page



Sewer In Columbia St Bet Juniper & Kalmia

.01.63774

Sta	Rod	Ground	Grade	
	H.I. 67.31			
-100 = N.L. Kalmia	590	6141	59.64	+1.77
-50	4.02	63.29	58.82	+4.47
0 = FT. 20'50 Kal.			58.00	
+50			57.18	
1			56.36	
+50			55.54	
2			54.72	
+50			53.90	
+95.5 = PC			53.16	
3+00			53.09	
+10			52.92	
+20			52.76	
+28.5 = Old Pipe			52.62	

H.I.

0.53 65.32 64.79

52.76 52.92
12.56 12.40
1.88 66.75 0.45 64.87

53.09 53.16 53.90 54.72 55.54
13.66 13.59 12.85 12.03 11.21

56.36 57.18 5
10.39 9.57

64.79
5.47
H.I. 70.26 58.00 57.18 59.64
12.26 13.08 10.62

58.82
11.44

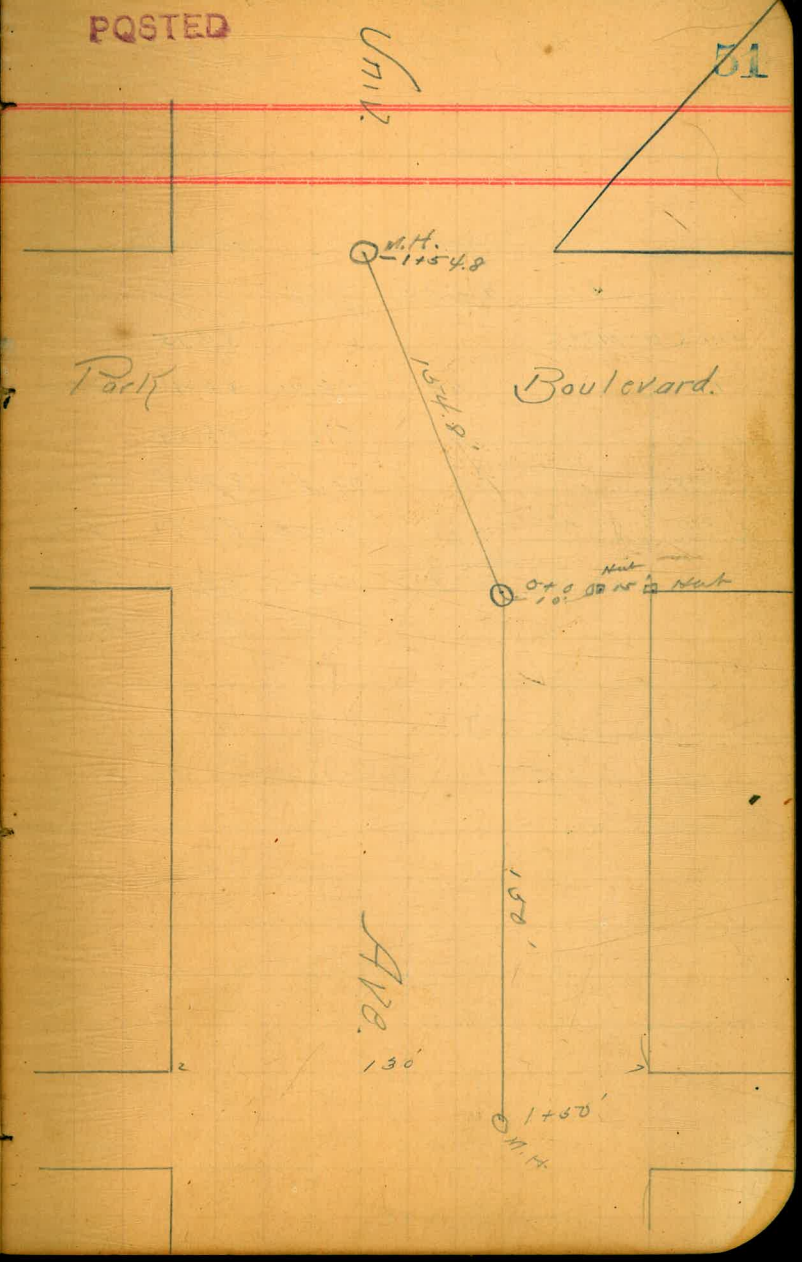
6 Davis
7 Brooks
06 Hawkins

Sewer in Univ Ave. from West line Park Blvd to Alley bet P.B & Georgia

6/25/06 Dave Hawkins Flowers

Sta	Rod	Ground	Grade	±
	323.46			
-1548 = M.H.			309.15	
-1+00	8.93	314.53	309.98	+4.55
-0+50	6.34	317.12	310.74	+6.38
0+00 = M.H.	4.92	318.54	311.50	+7.04
	332.43			
+50	8.53	323.90	315.17	+8.73
1+00	4.34	328.09	318.83	+9.26
1+50 = M.H.	1.40	331.03	322.50	+8.53
12.38	311.37		298.99	B.M.
11.68	322.75	0.30	311.07	
309.98	310.74	311.50		
12.77	12.01	11.25		
22.75				
5.66	328.16	0.25	322.50	
315.17	318.83			
12.99	9.33			
5.24	332.59	0.81	327.35	
		322.50		
		10.09		

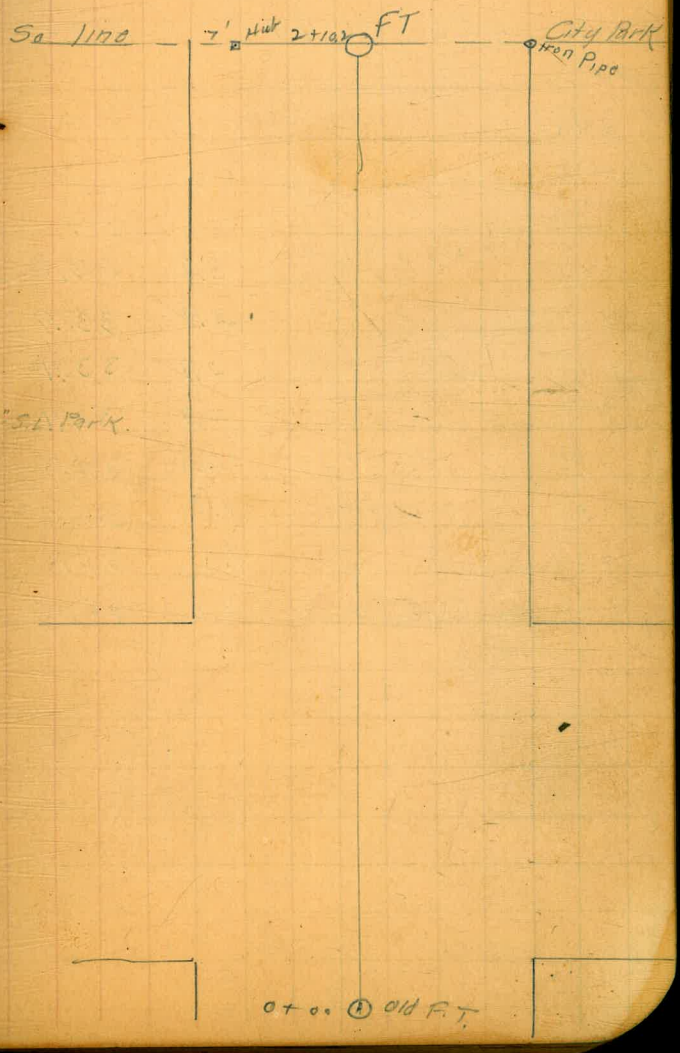
POSTED



Sewer in ℄ 15th St "A" to
So. line City Park 7/23/06 { Dave Moore Thomas

POSTED

	10.50	84.13		73.63 BM.	
	11.31	95.30 Rod	0.14 Ground	83.99 Grade	±
0+00 = Ctr Old F.T.				84.95	
+50		6.54	88.76	85.91	+2.85
1		7.40	87.90	86.88	+1.02
+50		5.10	90.20	87.84	+2.36
2 T.P.	4.21	0.68	94.62	88.81	+5.81
		98.83			
+10 = F.T.S.L. Park.		317	95.66	89.00	+6.66
			0.65	98.18 – BM Iron Pipe E.L. "A" S.L. Park.	



POSTED

"F" Steet Sewer 4th to 6th (private) July 27, 1906. { Childs Haslam Butler

		H.I.	Rod	Grade	Grade	cut
		H.I.				
B.M.	5.80	36.84		31.04		
0+00					23.23	
+45					23.45	
1+00					23.73	
+50					23.98	
2+00			3.8	33.0	24.23	8.8
+50			2.9	33.9	24.48	9.4
+98			2.9	33.9	24.72	9.2
3+00			2.9	33.9	24.73	9.2
+50			2.5	34.3	24.98	9.3
4+00			1.8	35.0	25.23	9.8
+24			1.5	35.3	25.35	10.0
+40	under curb		3.9	35.5	25.45	10.10

Sewer from 15th & Park to High School July 30.1906

POSTED

Childs

54

	H.I.	Rod	Ground	Grade	cut
		10.2		89.08	
0+00	103.24			88.81	+5.8
				90.67	
+50		6.7	96.5	90.54	+6.0
+92		9.8	93.4	92.0	+1.4
1+00		8.0	95.2	92.72	+2.5
+50		4.6	98.6	97.22	+1.4
2+00		0.27	102.97	101.72	+1.3
+50	116.02	8.4	107.6	106.22	+1.4
3+00		1.7	114.3	110.72	+3.6
+50	127.55	9.6	117.9	115.22	+2.7
4+00		4.7	122.8	119.72	+3.1
+50	139.48	8.63	130.85	128.86	+2.0
5+00	141.93	1.2	140.7	138.0	+2.7

3.42 101.60 98.18

90.67 92.00 92.72 97.22
10.93 9.60 8.88 4.38

12.73 113.67 0.66 100.94

101.72 106.22 110.72
11.95 7.45 2.95

11.43 123.44 1.66 112.01

110.72 115.22 119.72
12.72 8.22 3.72

8.01 130.89 0.56 122.88

128.86 119.72
2.03 11.17

Gutr Grades "D" St Paving.

POSTED

No Gutr		No Gutr	
E.L.9th	60.83	E.L.10th	67.83
	61.17		68.04
+25	61.52		68.24
	61.86		68.45
+50	62.21		68.66
	62.55		68.86
+75	62.89		69.07
	63.24		69.27
	63.58		69.48
	63.92		69.69
+25	64.28		69.89
	64.61		70.10
+50	64.96		70.31
	65.30		70.51
+75	65.64		70.72
	65.99		70.92
W.L.10th	66.33	W.L.11th	71.13

69.37 66.33 65.99 65.30 64.61 63.92
70.12 14 3.79 4.13 4.82 5.51 6.20

63.24 62.55 61.86 61.17
4.98 7.57 8.26 8.95

72.74 71.13 70.72 70.92 70.51 70.10
2.77 4.38 4.79 4.59 5.00 5.41
75.51 14

69.69 69.27 68.86 68.45 68.04 67.83
5.82 6.24 6.65 7.06 7.47 7.68

Gutr Grades "D" St.

		No Gutr
E.L. 11th		72.33
		72.41 ✓
+25		72.50 ✓
		72.58 ✓
+50		72.66
		72.75 ✓
+75		72.83
		72.92 ✓
		73.00
		72.85 ✓
+25		72.71
		72.56 ✓
+50		72.42
		72.27 ✓
+75		72.12
		71.98 ✓
W.L. 12th		71.83

75.51 Hd.

72.33 / 3.18 — 72.41 / 3.10 — 72.58 / 2.93 — 72.75 / 2.76

72.92 / 2.59 — 72.85 / 2.66 — 72.56 / 2.95 — 72.27 / 3.24 — 71.98 / 3.53

72.12 / 3.39 — 71.83 / 3.68 — 72.42 / 3.09 — 73.00 / 2.51 — 72.83 / 2.68

Gutr Grades "D" St.

	No. Gutr	
E.L. 8th	56.33	
	56.55	
+25	56.77	v
	56.99	v
+50	57.20	v
	57.42	v
+75	57.64	v
	57.86	v
	58.08	v
	58.30	v
+25	58.52	v
	58.74	v
+50	58.96	v
	59.17	v
+75	59.39	v
	59.61	v
W.L. 9th	59.83	v
Ctr 9th	61.00	

62.12
1.58
63.70/M

61.00
2.70v

59.83 59.61 59.39
5.87v 4.09v 4.31v

59.17 58.95 58.74 58.52 58.30
4.53v 4.75v 4.96v 5.18v 5.40

58.08 57.86 57.64 57.42 57.20
5.62v 5.84v 6.06v 6.28 6.50

56.99 56.77 56.55 56.33
6.71 6.93v 7.15v 7.37

Gutr Grades "D" St.

Ho	Gutr
E.L. 7th	53.83
	53.95
+25	54.08
	54.20
+50	54.33
	54.45
+75	54.58
	54.70
1	54.83
	54.95
+25	55.08
	55.20
+50	55.33
	55.45
+75	55.58
	55.70
W.L. 8th	55.83
Ctr. 8th	56.75
Ctr. 7th	54.00

57.75 BM.
1.13
58.88 Hi

56.75 / 2.13 — 55.83 / 3.05 — 55.70 / 3.18 — 55.58 / 3.30

55.45 / 3.43 — 55.33 / 3.55 — 55.20 / 3.68 — 55.08 / 3.80 — 54.95 / 3.93

54.83 / 4.05 — 54.70 / 4.18 — 54.58 / 4.30 — 54.45 / 4.43 — 54.33 / 4.55

54.20 / 4.68 — 54.08 / 4.80 — 53.95 / 4.93 — 53.83 / 5.05

72.74 Bm
3.65
76.39 Hi

71.50 / 5.06 / 4.89 / 6.17 — 72.0 / 4.39 — 71.5 / 4.89

Gutr Grades "D" St.

No	Gutr				
E.Line 6th	50.93				
	51.05 ✓				
+25	51.17 ✓				
	51.29 ✓				
+50	51.40 ✓				
	51.52 ✓				
+75	51.64 ✓				
	51.76 ✓				
1	51.88 ✓				
	52.00 ✓				
+25	52.12 ✓				
	52.24 ✓				
+50	52.35 ✓				
	52.47 ✓				
+75	52.59 ✓				
	52.71 ✓				
W.L.7th	52.83				

Bm.

1.59 56.40 54.81

5.47 / 50.93 | 51.05 / 3.35 ✓ | 52.83 / 3.57 ✓ | 52.71 / 3.69 ✓ | 52.59 / 3.81

52.47 / 3.93 ✓ | 52.35 / 4.05 ✓ | 52.24 / 4.16 | 52.12 / 4.28 | 52.00 / 4.40 | 51.88 / 4.52 ✓

51.76 / 4.64 | 51.64 / 4.76 ✓ | 51.52 / 4.88 | 51.40 / 5.00 ✓ | 51.29 / 5.11 ✓ | 51.17 / 5.23

51.05 / 5.35 ✓

	So	Qutr.	2.5' out	5' out	
W.L. 12th		70.83	70.73	71.03	✓
		70.89	70.79	71.09	
+25		✓ 70.95	70.85	71.15	✓
		✓ 71.02	70.92	71.22	
+50		✓ 71.08	70.98	71.28	✓
		✓ 71.14	71.04	71.34	
+75		✓ 71.20	71.10	71.40	✓
		✓ 71.27	71.17	71.47	
1		✓ 71.33	71.23	71.53	✓
		✓ 71.27	71.17	71.47	
+25		✓ 71.20	71.10	71.40	✓
		✓ 71.14	71.04	71.34	
+50		✓ 71.08	70.98	71.28	✓
		✓ 71.02	70.92	71.22	
+75		✓ 70.95	70.85	71.15	✓
		✓ 70.89	70.79	71.09	
E.L. 11th		✓ 70.83	70.73	71.03	✓

71.25 - Ctr 11th

N.S.

2.30 75.04 72.74 - 11th

70.83 / 4.21 ✓ 70.88 / 4.16 | 70.89 / 4.15 ✓ 70.95 / 4.09 ✓ 71.02 / 4.02 ✓ 71.08 / 3.96 ✓ 71.14 / 3.90 ✓

71.20 / 3.84 ✓ 71.27 / 3.77 71.03 / 4.01 71.15 / 3.89 71.28 / 3.76 71.40 / 3.64 71.33 / 3.71

71.27 / 3.77 71.20 / 3.84 ✓ 71.14 / 3.90 ✓ 71.08 / 3.96 71.02 / 4.02 70.95 / 4.09 ✓

70.89 / 4.15 70.83 / 4.21 71.25 / 3.79

2.45 75.19 72.74

71.25 / 3.94

	5a Centr	7.5'	5.0'
W.L. 1st	70.33	70.22	70.43
	70.14		
7.25	69.95		
	69.77		
7.50	69.58		
	69.39		
7.75	69.20		
	69.02		
	68.83		
	68.64		
8.25	68.45		
	68.27		
8.50	68.08		
	67.89		
8.75	67.70		
	67.52		
9" EL. 10th	67.33		

75.04 14.

70.33 / 4.71	70.14 / 4.90	69.95 / 5.09	69.77 / 5.27	69.58 / 5.46	69.39 / 5.65
69.20 / 5.84	69.02 / 6.02	68.83 / 6.21			

75.79 14.

		68.83 / 6.36	68.64 / 6.55	68.45 / 6.74	
68.27 / 6.92	68.08 / 7.11	67.89 / 7.30	67.70 / 7.49	67.52 / 7.67	67.33 / 7.86

14.

0.86 73.60 72.74 13

69.20 / 4.40	69.02 / 4.58	68.83 / 4.77	68.64 / 4.96	68.45 / 5.15	68.27 / 5.33
68.08 / 5.52	67.89 / 5.71	67.70 / 5.90	67.52 / 6.08	67.33 / 6.27	

E.L. 9 50	Center			
	60.83	60.73	60.93	
	61.14			
+25	61.45			
	61.77			
+50	62.08			
	62.39			
+75	62.70			
	63.02			
1	63.33			
	63.64			
+25	63.95			
	64.27			
+50	64.58			
	64.89			
+75	65.20			
	65.52			
W.L. 10	65.83 N	65.73	65.93	
Ctr "	67.25			

0.09 69.46 69.37

67.25	60.83	60.83	65.52	66.50
2.21	.63	3.63	3.94	2.96
60.83	61.14	61.45	61.77	62.08
8.63	8.32	8.01	7.69	7.38

0.60 69.97 69.37

62.39	62.70	63.02	63.33	63.64	63.95	
7.58	7.27	6.95	6.64	6.33	6.02	
64.27	64.58	64.89	65.20	65.52		
5.70	5.39	5.08	4.77	4.45		

0.05 69.72 69.87

65.83	65.52	65.20	64.89	64.58	64.27
3.89	4.20	4.52	4.83	5.14	5.45
63.95	63.64	63.33	63.02	62.70	62.39
5.77	6.08	6.39	6.70	7.02	7.33
62.08	61.77	61.45	61.14	60.83	
7.64	7.96	8.27	8.58	8.89	

	50 Center			
W.L. 9ft	59.33 W	59.23	59.45	
	59.11 W			
+25	58.89 W			
	58.67 W			
+50	58.45 W			
	58.24 W			
+75	58.01 W			
	57.80 W			
/	57.58 W			
	57.36 W			
+25	57.14 W			
	56.92 W			
+50	56.70 W			
	56.49 W			
+75	56.27 W			
	56.05 W			
E.L. 80ft	55.83	6-5.73	55.93	
Ctr 8ft	56.00			
Ctr 9ft	60.75			

Ht.

1.60 63.72 62.12

60.75 59.33 59.11 58.89 58.67
2.97 4.39 W 4.61 W 4.83 W 5.05

58.45 58.24 58.11 57.80 57.58 57.36
5.27 5.48 W 5.71 W 5.92 W 6.14 W 6.36 W

57.14 56.92 56.70 56.49 56.27 56.05 55.83
6.58 6.80 W 7.02 W 7.23 W 7.45 7.67 7.89

54.50 56.00
3.22 1.72

1.80 W 63.12 62.12

59.33 59.11 58.89 58.67 58.45 58.24 58.01
3.81 W 4.03 W 4.25 W 4.47 W 4.69 W 4.70 W 5.13

57.81 57.58 57.36 57.14 56.92 56.70 56.49
5.34 W 5.56 W 5.78 W 6.00 6.22 6.44 W 6.65 W

56.27 56.05 55.83
6.87 W 7.09 7.31 W

"D" 5+

South Center		2' out	5' out
W.L. 8+	54.83	54.73	54.93
	54.70 ✓		
+25	54.58 ✓		
	54.45 ✓		
+50	54.33 ✓		
	54.20 ✓		
+75	54.08 ✓		
	53.95 ✓		
	53.83 ✓		
	53.70 ✓		
+25	53.58 ✓		
	53.45 ✓		
+50	53.33 ✓		
	53.20 ✓		
+75	53.08 ✓		
	52.95 ✓		
E.L. 7+	52.83 ✓	52.73	52.93

58.23

53.83 53.95 53.08 53.20 53.33
5.40 5.28 5.16 5.03 4.90
53.45 53.58
4.78 4.65

6.43 60.10 4.55 53.68

53.70 53.83 53.95 54.08 54.20
6.40 6.27 6.15 6.02 5.90
54.33 54.45 54.58 54.70 54.83
5.77 ✓ 5.65 5.52 ✓ 5.40 5.27
55.75
4.35

Bottom of Culvert 1.27 below ch. grade.
Total width of Culvert 3.33' — 1.67 from ch. ctr.
Walls 8"

Culvert west side 11th.

	Grade of Bottom.	Grade of Surface
N.L.D	70.53 ✓	71.70
+10	70.39 ✓	71.66
+20	70.26 ✓	71.61
+32.5 N. Rail	70.09 ✓	71.56
+32.5 S. Rail	69.89 ✓	71.62
+20	69.73 ✓	
+10	69.59 ✓	
S.L. "D"	69.46 ✓	70.63

Culvert - E. line 11th.

N.L. "D"	71.72 ✓
+10	71.51 ✓
+20	71.30 ✓
+32.5 Rail	71.05 ✓
+32.5	70.73 ✓
+20	70.47 ✓
+10	70.27 ✓
S.L. "D"	70.06 ✓

H.I.
4.08 76.82 72.74 BM S.W. 11th

6.09
70.73 = Elev of Ch. S.W. 11th & D

70.53 / 6.29 — 70.39 / 6.43 — 70.26 / 6.56 — 70.09 / 6.73 — 71.66 / 5.16 — 71.61 / 5.21

3.83 / 72.99 - NED. — 5.49 / 71.33 - SED. — 71.72 / 5.10 — 71.51 / 5.31 — 71.30 / 5.52

71.05 / 5.77 / 3.22

H.I.
75.96 72.74

70.06 / 5.90 — 70.27 / 5.69 — 70.47 / 5.49 — 70.73 / 5.23

69.46 / 6.50 — 69.59 / 6.37 — 69.73 / 6.23 — 69.89 / 6.07

1.27 below Ch. bottom

Culvert E. Side 10th

N.L.D	67.35	✓
+10	67.27	✓
+20	67.19	✓
+32.5 Rail	67.09	✓
+32.5 Rail	66.99	✓ 66.81
+20	66.89	✓ 66.79 ✓
+10	66.82	✓ 66.72
S.L. "D"	66.74	✓ 66.64

Culvert W. Side 10th

N.L.D	65.76	✓
+10	65.70	✓
+20	65.64	✓
+32.5	65.57	✓
+32.5	65.48	✓
+20	65.40	✓
+10	65.34	✓
S.L.D	65.28	✓

141

3.36 72.73 6937 B.M.

4.72	4.11	5.70	6.18
68.01 S.E	68.62 N.E	67.03 N.W.	66.55 S.W.
67.35	67.27	67.19	67.09
5.38 ✓	5.46 ✓	5.54 ✓	5.64 ✓

1.61 70.98 6937 B.M.

65.76	65.70	65.64	65.57
5.22	5.28	5.34	5.41

2.48 71.85 69.37

~~65.78~~	65.74	66.82	66.89	66.99
~~6.57~~	5.11	5.03 ✓	4.96	4.86

141

2.10 71.47 69.37

66.89	66.79	66.72	66.64	
4.58	4.68 ✓	4.75	4.83	
65.57	65.48	65.40	65.34	65.28
5.90	5.99	6.07	6.13	6.19

Culvert E. Side 9th

N.L. 'D'	60.53
+10	60.48
+20	60.42
+32.5 R.R.	60.36
+32.5	60.28
+20	60.21
+10	60.16
S.L. 'D'	60.11

Culvert W. Side 9th

N.L. 'D'	59.30
+10	59.24
+20	59.18
+32.5 R.	59.11
+32.5 R	59.02
+20	58.95
+10	58.89
S.L. D.	58.83

N.

4.06 66.18 67.12

1.08 / 5.61 / 4.55 / 4.63

SW 60.10 / 60.57 NW / 61.63 NE / 61.55 E.

60.53 / 60.48 / 60.42 / 60.36 / 60.10

5.65 / 5.70 / 5.76 / 5.82 V / 6.05 / 6.58 V

59.30 / 59.24 / 59.18 / 59.11

6.88 V / 6.94 V / 7.00 / 7.07

3.11 65.23 62.12 60.82 4.41

3.24 65.36 62.12

60.11 / 60.16 / 60.21 / 60.28

5.26 V / 5.20 / 5.15 / 5.08

3.16 65.28 62.12

58.83 / 58.89 / 58.95 / 59.02

6.45 / 6.39 / 6.33 / 6.26

Culvert E. Side 8th

N.L.D.	55.65
+10	55.60
+20	55.55
+32.5 R.	55.48
+32.6 R.	55.41
+20	55.34
+10	55.29
S.L.D.	55.24

Culvert W. Side 8th.

N.L.D	55.20
+10	55.07
+20	54.94
+32.6 R	54.79
+32.6 R.	54.69
+20	54.44
+10	54.31
S.L.D	54.18

14

3.47 61.22 57.75 BM

4.71 4.40 4.65 5.77

56.51 S.E | 56.82 NW | 56.57 NW | 55.45 N.

3.46 61.21 57.76

55.65 55.60 55.55 55.48

5.56 5.61 5.67 5.73

3.41 61.16 57.75

55.20 55.07 54.94 54.79

5.96 6.09 6.22 6.37

57.75

~~3.46~~ ~~60.91~~

54.18

6.73

3.89 61.64 57.75

55.24 55.29 55.34 55.41 55.48

6.40 6.35 6.30 6.23 6.16

54.18 54.31 54.44 54.59 54.79

7.46 7.33 7.20 7.05 6.85

bottom 1.27 below ch E lev.

Culvert E Side 7th

N.L. "D"	53.21
+10	53.09
+20	52.97
+32.5 R	52.82
+32.5 R	52.56
+20	52.34
+10	52.17
S.L. "D"	52.00

Culvert W. Side 7th

No. line D	52.34
+10	52.26
+20	52.18
+32.5 R	52.09
+32.5 R	51.97
+20	51.87
+10	51.80
S. L. D.	51.72

3.42 58.23 54.81

5.24 4.97 3.75 4.62

52.99 S.W 53.26 S.E 54.48 N.E 53.61 NW

52.34 52.26 52.18 52.09

5.89 5.97 6.05 6.14

3.52 58.33 54.81

52.82 52.97 53.09 53.21

5.51 5.36 5.24 5.12

3.55 58.36 54.81

51.72 51.80 51.87 51.97

6.64 6.56 6.49 6.39

52.00 52.17 52.34 52.56

6.36 6.19 6.02 5.80

		Gutr	2.5'	5.0
E.L. 6+00		50.46	50.36	50.56
		50.58		
25		50.69		
		50.81		
50		50.92		
		51.04		
75		51.16		
		51.28		
100		51.39		
		51.51		
125		51.63		
		51.74		
150		51.86		
		51.98		
175		52.10		
		52.21		
W.L. 7+00	5.	52.33	52.23	52.43

2.32 57.13 54.81

6.77 / 50.58 50.69 50.81 50.93 51.04
50.36 / 6.55 6.44 6.32 6.20 6.09
51.16 51.28 51.39
5.97 5.85 5.74

2.50 57.31 54.81

51.39 51.51 51.63 51.74 51.86
5.92 5.80 5.68 5.57 5.45
51.98 52.10 52.21 52.33
5.33 5.21 5.10 4.98

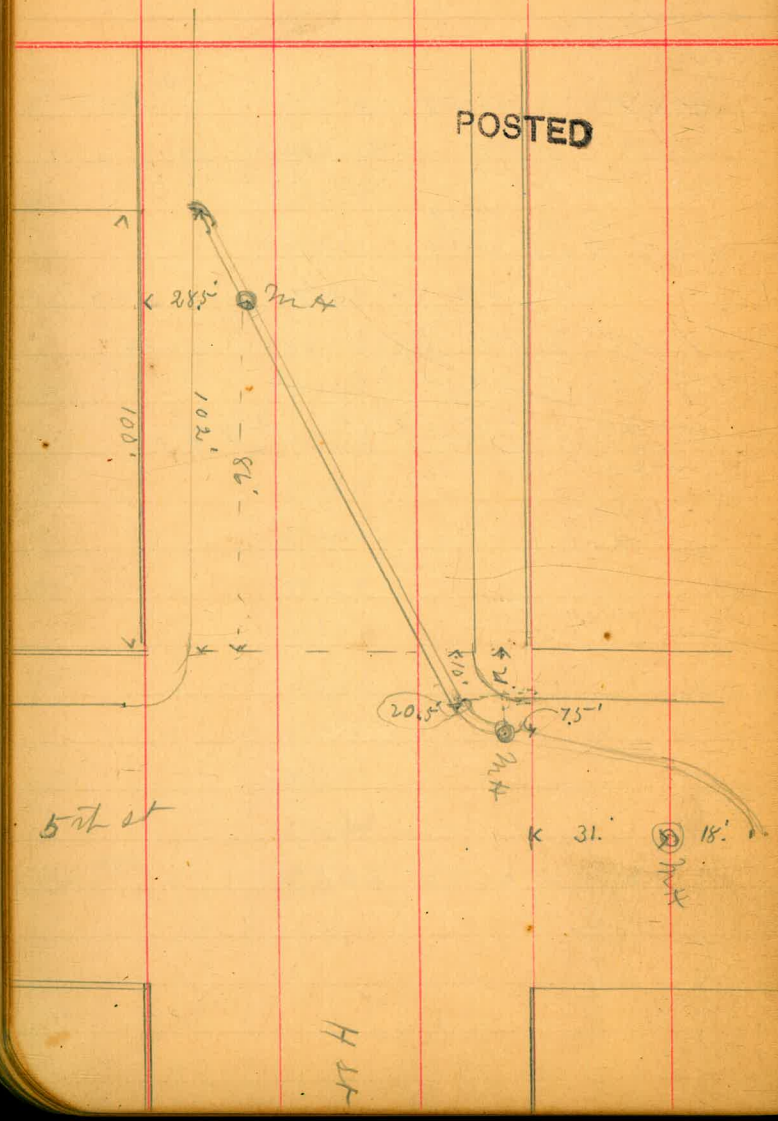
53.25
4.06

Location of Sewer for Masonic Blk
5th & H St

100 F

72

POSTED



X Section of Kearney from So 21st to N. St.

POSTED

	0.11	24.77			24.66
	W. Line So 21st				
So			7.1		
Cb			7.0		
1/4			7.5		
C			6.3		
1/4			6.2		
Cb			7.2		
No			7.4		
	18' W So 21st				
No			6.6		
Cb			7.1		
1/4			7.4		
C			8.3		
1/4			8.4		
Cb			8.6		
So			9.0		

25' W. So 21st	
So	8.2
Cb	7.6
1/4	7.7
C	7.5
1/4	7.3
Cb	6.4
No	6.4
50' W So 21st	
No	4.7
Cb	4.6
1/4	4.9
C	5.6
1/4	6.6
Cb	6.4
So	6.9

24.77

75' W of 5.21 St

So	6.7
Cl	6.1
Sd	5.3
C	5.0
Sd	4.6
Cl	4.0
No	3.9

100' W of 5.21 St

No	3.2
Cl	3.5
Sd	4.3
C	4.5
Sd	4.9
Cl	5.5
So	6.2

125' W of 5.21 St

So	5.5
Cl	5.3
Sd	5.1
C	4.5
Sd	3.7
Cl	2.6
T.P. 9.42 30.38	3.81 20.96
No	3.5

150' W 5.21 St

No	1.5
Cl	1.9
Sd	3.3
C	7.2
Sd	10.1
Cl	10.9
So	11.2

POSTED 76

30-38

175' W So. 21st.

So.	11.1
Cl.	8.4
Fill	5.1
C	1.8
Fill	2.2
Cl.	1.5
No.	1.4

194.45 W. E. line 18th on So. Side Kearney

No.	1.8
Cl.	2.0
Fill	2.5
C	2.5
Fill No. of Cl.	2.5
Cl.	3.0
So.	4.7
	10.4

Transferred to Book No 2

194.45' W. on So. line 9th 223.29' W. on No. Side "S.L." N. 5th

So.	10.4
Cl.	4.3
Fill	3.0
C	3.0
Fill	3.0
Cl.	3.1
No.	2.6

3.30
54.81
58.11 H.I.

57.75
.038
58.13

62.12
4.05
66.17 H.I.

63.58
2.59

62.89
3.28

62.20
3.97

61.52
4.65

61.50
66.75
8 | 5.50
.6875

60.83
5.34

60.25
56.75
3.50
.875

60.83
.6875
61.5175
62.2850
68.25
62.8925
63.5800

3.98
72.74
76.72 H.I.

71.8
73.0
2.48
72.40 Ctr

73.00
3.72

4.32

71.80
4.92

1.79
69.37
71.16 H.I.

67.0
68.5

67.75
3.41

56.75 = EL 8th
60.25 = W.L. 9th
56.00 = W.L. 8th

54.00 = E.L. 7th
53.25 = W.L. 7th

62.12 Ave
68
62.80 H.I.
50.3
57.77

60.25
2.55

59.37
3.43

58.50
4.30

57.62
5.18

56.75 = EL 8th
8.75
57.625
58.500
8.75
59.375
60.250 = W.L. 9th

56.75
6.05

56.37
6.43

56.00
6.80

54.00 = EL 7th
~~54.50~~ 130 W 8th
55.0 100 W 8th
55.50 50 W 8th
56.00 = W.L. 8th

53.63 = Ctr 7th
53.25 = W.L. 7th

56.00 = W.L. 8th
56.37 = Ctr 8th

57.75
57.76

WL 7th 53.25
EL 7th 54.00
WL 8th : 56.00

2.15
55.96

55.50
2.61

55.00
3.11

54.50
3.61

54.00
4.11

53.63
4.48

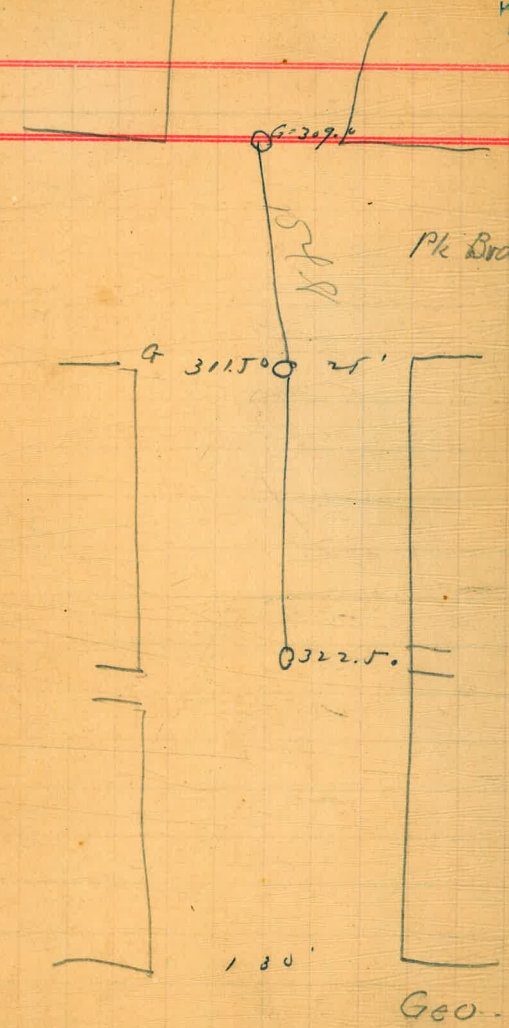
53.25
4.86

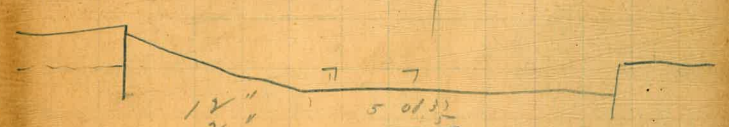
298.99 - ~~Pole~~ N.E. Ann & Ctr. (new square) no side 30' c of of w end of trestle.

301.96 - BM N.W Blvd.

6th		
51.0		51.5
53.0	54.81	53.5
7th		
53.50		54.50
55.50		56.50
8th		
56.50	57.75	57.00
60.0	2.12	60.50
9th		
61.50		61.50
66.50		67.00
10th		
68.00	69.37	68.50
72.73 71.00		71.80
11th		
71.50		73.00

Note st widened 25' on Rail side





4.77
344.11
348.88
4.40
344.48

B.M. 286.90 N.E. cor. Vermont & Thornton
sp. in Elec. brace pole.
B.M. 179.79 N.W. cor 24th & B.

11.08
136.85
141.93

64.79
3.93
68.72

110.54
102.46
8.08
101.35
9.19
100.25
10.29
103.78
6.76

6.89
103.78
110.67
106
4.67
6.27
188.34
194.61
10.51
184.10
65
183.45

24607
.76
245.91
1260
258.51
29
258.22
11.85
269.07
71
268.36
10.86
279.22
.89
278.35

262.41
12.90
249.51
5.25
254.76
4.21
250.55
7.37
257.92
12.65
245.27
80
246.07

370) 3.450 (.93
3330
1200

.1860
.0093
6
.0558

15.1
11.8
10.35
13.15
50.40

269

107.37
3.17
110.54
11.90
98.64

159.5

161.5
159.81
1.7

169.91
160.10
9.81
159.82
10.09
160.41
9.50
160.71
9.20
161.01
8.90
161.32
8.59

275.28
2.92
278.20
9.60
268.60
6.19
274.79
12.74
262.05
2.21
262.41

.0442
30
1.3260

.006
3
.018

1.50
179.79
181.29
12.95
168.34 T.P.
1.57
169.91
159.5
10.41

4.53
165.08
161.74
3.34
18529
18280
249
10.10
159.81

11.37
53
11.90
9.68
160.23
159.81
0.42
31
73

99
93
1.92

165) 7.30 (4.42
660
700
660
1400

280) 2000 (.7144
1960
400
280
1200

159.5
0.73

2
.93
15
465
93
.1395

280) 1.700 (.607
1680
2000

165

.0442
35
2210
1326
1.5470

1.214
1.821
.0442
.75
2210
884
1.1050

Return to City Engineers Office
City Hall, San Diego, Cal.

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60 53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		

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