29th St.

DODSON ST. — "K" — "N"

27TH ST. — "N" — "H"

26TH ST. — "K" — "H"

HOITT ST. "K" — "H"

28TH ST. "K" — "H"

OLD 29TH ST. "N" — "L"

EVANS ST. "N" — "L"

Main St at 32d

LEVEL

National Ave, N to 12th

Sargent Ave, 28th — 32d (Profile)

Ctr Line "I" St. — 27th to 29th.

201

F.B. 201

201

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

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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 a chain on the slopes, to make one chain, horizontal measurement.

Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links
°		°		°		°	
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

201

1400 top of Post 2 16th & N

4667 Milton SE Elec Pole

63196 NE Sargent 31st Fence

92977 SW " 29th Plane

77955 Franklin - Sampson

SW spike at base of light mast

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Ta

Mi

1
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Giorgini
316.21 SW. Spk ~ Poli

REED'S 29TH ST.
"N" — "H"
12/18/05
COVERT
WETMORE.

B.M	2.05	76.32		74.27
0 =	N.L.	"N"		
+50				
1				
+50				
2				
+50				
+99				
3 =	S.L.	"M"		
	C.L.	"M"		
0 =	N.L	"M"		
+01				
	7.72	81.99	2.05	74.27
+50				
1				
+50				
2				

E.L.		C.L		W.L	
SMALL NAIL IN PHONE POLE AT N.E. COR					REEDS 29 "M"
7.1	69.2	6.4	69.9	6.1	70.2
4.6	71.7	4.7	71.6	4.9	71.4
4.7	71.6	4.0	72.3	5.7	70.6
5.2	71.1	6.3	70.0	6.7	69.6
6.6	69.7	6.6	69.7	5.8	70.5
4.2	72.1	3.8	72.5	3.4	72.9
4.2	72.1	3.1	73.2	3.0	73.3
4.7	71.6	4.7	71.6	4.1	72.2
4.2	72.1	4.1	72.2	3.8	72.5
3.5	72.81	3.4	72.9	3.1	73.2
2.2	74.1	2.2	74.1	2.2	74.1
7.9	74.1	7.4	74.6	7.0	75.0
7.4	74.6	7.3	74.7	6.9	75.1
6.8	75.2	6.6	75.4	6.4	75.6
6.3	75.7	6.1	75.9	5.5	76.5

		REEDS 29TH				E.L.		C.L.		W.L.	
		81.99									
+50						5.4	76.6	5.1	76.9	4.8	77.2
3	= S.L.	"L"				5.1	76.9	4.5	77.5	4.1	77.9
	C.L	"L"				4.3	77.7	4.3	77.7	3.7	78.3
0	M.L	"L"				4.5	77.5	3.9	78.1	3.2	78.8
+50						4.2	77.8	3.7	78.3	3.3	78.7
1						3.8	78.2	3.4	78.6	2.6	79.4
+50						3.8	78.2	3.1	78.9	2.6	79.4
2						3.8	78.2	3.1	78.9	2.6	79.4
+50						3.6	78.4	2.9	79.1	2.2	79.8
3	11.42	91.88	1.53	80.46		S.W. COR. "K" & REEDS 29TH ON PLUG					
3	= S.L.	"K"				13.0	78.9	12.1	79.8	11.4	80.5
	C.L	"K"				20' OFFSET IN ST. ON EAST LINE				10.9	81.0
0	M.L	"K"				12.5	79.4	11.8	80.1	10.4	81.5
+50						12.5	79.4	11.7	80.2	10.0	81.9
1						10.7	81.2	9.5	82.4	8.2	83.7
+50						8.3	83.6	6.9	85.0	4.9	87.0
+55										5.5	86.4

		REED'S 29TH				E.L		C.L		W.L	
		91.88									
										3.7	88.2
+65										4.0	87.9
+90										2.1	89.8
+95										1.8	90.1
2						4.9	87.0	4.9	87.0		
								4.7	87.2		
+05								3.0	88.9		
+10						4.9	87.0				
+25						2.6	89.3				
+27											
	12.63	104.23	0.28	91.60							
						12.4	91.8	11.5	92.7	8.9	95.3
+50						6.7	97.5	3.3	100.9		
3						5.6	98.6	2.2	102.0		
+05.1	= S.L.	"J"									
	12.82	116.96	0.09	104.14							
										12.1	104.9
3										11.0	105.0
+05.1	S.L.	– "J"									
	C.L.	"J"				11.3	105.7	7.6	109.4	3.1	113.9
						3.5	113.5				
0	N.L.	"J"									

		REEDS 29TH				E.L		C.L.		W.L
	12.78	129.70	0.04	116.92						
0 =	N. L. "J"							11.3	118.4	7.0 122.7
+50			7.01	122.69		"J"	& REED'S 29TH		N.W. COR.	ON PLUG
+50						4.9	124.8	3.3	126.4	
	12.94	142.01	0.63	129.07						
+50										11.2 130.8
1						9.0	133.0	7.6	134.6	5.5 136.5
+30								1.2	140.8	3.8 138.2
+50						+ 1.9	143.9	+ 0.4	142.4	4.0 138.0
+60						+ 2.7	144.7			
+70										5.2 136.8
2						1.6	140.4	6.0	136.0	11.9 130.1
+50						9.0	133.0			
	0.0	129.23	12.78	129.23						
+15										0.8 128.4
+50								1.6	127.6	9.0 120.2
3+0.35 =	S.L	"I"				3.2	126.0	9.7	119.5	

	REEDS 29TH				
		129.23			
+10					
	C.L.	"I"			
	0.07	116.28	13.02	116.21	
	S.L.	I.			
			3.16	113.12	
	C.L.	'I'			
0 =	N.L.	I			
+50					
+75					
1					
+10					
+30					
+35					
+50					
+60					
2					
+50					
+95.3	S.L. -	"H"			

E.L		C.L		W.L	
		12.1	117.1		
8.3	120.9				
				3.2	113.1
S.W. COR. REEDS 29TH & 'I'				ON PLUG	
		3.0	113.3	9.3	107.0
1.1	115.2	7.3	109.0	14.3	102.0
5.4	110.9	11.7	104.6	17.1	99.2
				18.8	97.5
7.3	109.0	15.6	100.7	15.5	100.8
9.4	106.9	17.1	99.2		
10.5	105.8				
13.8	102.5				
14.5	101.8	14.3	102.0	11.6	104.7
15.8	100.5				
13.2	103.1	11.1	105.2	6.9	109.4
11.2	105.1	6.8	109.5		
7.3	109.0	2.2	114.1		

					E.L.	G.L.	W.L
	REEDS 29TH						
		116.28					
			7.23	109.05	S.E. "H" & REEDS 29TH ON PLUG		
	12.62	128.90	0.0	116.28			
2+50	NORTH OF "I"						11.5 117.4
2+95.3	S. L. 'H.'						5.2 123.7
			0.16	128.74			

~~SHORT 31 ST ST.~~ DODSON ST

"H" — "H" {COVERT WETMORE

12/18/05

	9.83	138.57		128.74
0 =	S. L.	"H"		
			0.13	138.44
+50				
1				
	6.99	145.43	0.13	138.44
0+50				
1				
+45				
+50				
+55				
2				
~~+40~~				
+50				
3	= M. L.	"I"		
	= C. L.	"I"		
			7.87	137.56
	0.03	132.68	12.78	132.65

E.L.		C.L		W.L	
0.1	138.5	6.5	132.1	13.9	124.7
S.W.	"H" &	3p ST.	ON HUB.		
		4.0	134.6	10.5	128.1
		0.2	138.4	6.0	132.6
5.3	140.1				
2.3	143.1				
				9.8	135.6
1.1	144.3	5.3	140.1	8.4	137.0
				7.8	137.6
0.4	145.0	4.5	140.9	8.7	136.7
1.0	144.4				
2.4	143.0	4.5	140.9	7.1	138.3
7.9	137.5	7.4	138.0	8.2	137.2
11.5	133.9	11.2	134.2	10.4	135.0
N.E.	SHORT 3p ST	& I.	ON	PLUG	

~~SHORT~~ ~~31ST~~ DODSON ST

		132.68				E.L		C.L		W.L		9
0 =	S. L.	"I"										
+50						2.4	130.3	2.3	130.4	0.6	132.1
1						11.1	121.6	9.2	123.5	5.4	127.3
										11.5	121.2
	0.13	119.97	12.84	119.84							
1						6.6	113.4	3.6	116.4		
+50						13.9	106.1	10.4	109.6	5.3	114.7
2										10.7	109.3
	- .12	107.00	12.85	107.12							
2						6.2	100.8	3.3	103.7		
+50						11.4	95.6	9.9	97.1	5.4	101.6
3.	= H. L.	"J"								12.8	94.2
	0.02	93.89	13.13	93.87							
3	= H. L	"J"				4.1	89.8	2.0	91.9		
+35	C.L					7.4	86.5				
+40	C. L	"J"				9.1	84.8	6.7	87.2	5.0	88.9
+65										7.2	86.7
+70										9.1	84.8

~~SHORT 31ST~~ ST DODSON ST

		93.89			
0 =	S. L.	"J"			
	0.42	82.79	11.52	82.37	
+50					
1					
+50					
2					
+50					
3 =	N. L.	"K"			
CK.			2.33	80.46	80.46 80.46 0

EL		C. L		W. L	
11.6	82.3	10.5	83.4	8.8	85.1
S.E.	"J" & SHORT 30TH SPIKE IN FENCE COR.				
3.8	79.0	2.5	80.3	1.1	81.7
6.5	76.3	5.6	77.2	4.2	78.6
8.3	74.5	7.6	75.2	6.8	76.0
8.9	73.9	8.7	74.1	8.1	74.7
9.5	73.3	9.0	73.8	7.9	74.9
9.7	73.1	9.4	73.4	8.4	74.4
S.W.	COR. REEDS 29TH & "K"				

27TH ST.
"N" — "H"
12/19/05

{COVERT
WETMORE
MOORE

	3.69	77.96		74.27
	0.63	71.96	6.63	71.33
			2.70	69.26
	3.02	69.23	5.75	66.21
0 =	NORTH	LINE "N" ST.		
+20				
+30				
+50				
1				
+50				
+70				
2				
+50				
+99				
3	= SOUTH	LINE. "M" ST		
	CENTER	LINE "M" ST		
	NORTH	LINE "M" ST		

E.L		C.L		W.L	
N.E.	REED'S 29TH & "M"	NAIL IN PHONE POLE			
N.W.	~~OLD~~ 29TH & "M"	SPIKE IN ELEC. POLE			
N.E.	(EVANS) SHORT 28TH & "M"	SPIKE IN ELEC POLE.			
N.W.	27TH & "M"	SPIKE IN ELEC. POLE			
5.9	63.3	4.9	64.3	4.8	64.4
4.2	65.0				
3.2	66.0				
3.7	65.5	4.6	64.6	5.0	64.2
4.4	64.8	4.8	64.4	4.8	64.4
5.5	63.7	5.3	63.9	5.2	64.0
				6.0	63.2
5.0	64.2	4.9	64.3	5.2	64.0
1.8	67.4	1.9	67.3	3.4	65.8
2.2	67.0	2.5	66.7	2.4	66.8
3.4	65.8	4.1	65.1	4.1	65.1
3.5	65.7	3.7	65.5	4.0	65.2
3.5	65.7	3.4	65.8	3.6	65.6

27TH ST.

	12.94	79.15	3.02	66.21							
+50											
1											
+50											
2											
+50											
3 =	SOUTH LINE "L" ST.										
B.M.			1.36	77.79							
	CENTER LINE "L" ST.										
0 =	NORTH LINE "L" ST.										
	12.97	92.06	0.06	79.09							
+50											
1											
+50											
2											
+15											
+25											

EL		C.L.		WL	
11.1	68.0	11.3	67.8	11.7	67.4
9.7	69.4	9.9	69.2	10.6	68.5
9.6	69.5	10.2	68.9	10.3	68.8
8.0	71.1	8.9	70.2	9.1	70.0
6.0	73.1	6.7	72.4	7.4	71.7
3.9	75.2	4.0	75.1	4.2	74.9
S.E. 27TH & "L" - SOUTH NOZZLE OF FIRE HYDRANT					
2.2	76.9	2.1	77.0	2.1	77.0
0.0	79.1	0.0	79.1	+0.2	79.3
N.W. 27TH & L ON PLUG.					
10.4	81.7	10.1	82.0	10.1	82.0
8.0	84.1	7.8	84.3	7.7	84.4
5.5	86.6	5.4	86.7	5.0	87.1
2.7	89.4	2.6	89.5	2.2	89.9
1.5	90.6				
		2.1	90.0	1.2	90.9

81	27TH ST.					E.L.		C.L.		W.L.	
	12.73	104.48	0.31	91.75							
B.M.			3.52	100.96	100.96 100.96 .00	S.E.	27TH & "K" SPIKE IN FENCE COR.				
+25						10.4	94.1				
+50						10.0	94.5				
+70						9.1	95.4	11.8	92.7	10.4	94.1
3	= SOUTH LINE "K" ON 45 FT. ST. LINE					3.9	100.6	3.9	100.6	5.0	99.5
3 = S.L. "K" ON 87 FT. ST. LINE						4.8	99.7				
	12.81	116.75	0.54	103.94							
	CEN. LINE "K"					87 - 10.1	106.8				
						60 - 10.1	106.6	11.0	105.7	11.7	105.0
						87 - 4.6	112.1				
0	NORTH LINE "K"					60 - 3.9	112.8	5.1	111.6	5.7	111.0
	12.94	129.59	0.10	116.65		87					
						60					
						87 - 10.0	119.6				
+50						60 - 9.5	120.1	10.3	119.3	12.1	117.5
						87 - 4.6	125.0				
1						60 - 3.6	126.0	4.2	125.4	7.1	122.5
						87 - 1.1	128.5				
+50						60 - 0.5	129.1	1.5	128.1	3.1	126.5
2	12.95	142.46	0.08	129.51							
						87 - 10.2	132.3				
2+						60 - 10.2	132.3	11.2	131.3	13.0	129.5
						87 - 5.8	136.7				
+50						60 - 6.4	136.1	7.7	134.8	8.2	134.3

		27TH ST									
		142.46									
3+01.5	SOUTH LINE "J" ST.										
	12.85	155.11	0.20	142.26							
	CENTER LINE "J" ST.										
	10' N. OF CEN. = OFFSET IN STREET.										
0	NORTH LINE OF "J" ST.										
B.M.			12.56	142.55							
+50											
1											
—	5.04	159.36	0.79	154.32							
+50											
2											
+50											
3	= SOUTH LINE "I" ST										
			5.47	153.89							
	0.285	146.745	12.90	146.46							
	SOUTH LINE "I" ST										
	CENTER LINE "I" ST										

	E.L		C.L		W.L	
87-1.0	141.5					
60-1.6	140.9		2.3	140.2	3.1	139.4
87-10.5	144.6					
60-10.1	145.0		10.2	144.9	9.6	145.5
87-9.7	145.4					
60-9.5	145.6					
	6.8	148.3	7.3	147.8	6.3	148.8
S.W.	27TH & "J" SPIKE IN NEW PHONE POLE.					
	3.4	151.7	3.8	151.3	3.3	151.8
	1.2	153.9	1.0	154.1	0.6	154.5
	5.0	154.4	3.0	156.4	3.0	156.4
	4.9	154.5	2.4	157.0	1.5	157.9
	6.2	153.2	3.6	155.8	1.1	158.3
			9.3	150.1	5.5	153.9
S.W.	27TH & "I" ON PLUG					
	1.4	145.3				
	6.9	139.8	4.1	142.6	0.7	146.0

	27TH ST				E.L		C.L		W.L	
		140.745								
0	NORTH	LINE "I"	ST.				11.8	134.9	9.2	137.5
+15									11.5	135.2
	0.02	134.43	12.335	134.41						
0	NORTH	LINE "I"	ST.		2.0	132.4				
+15							1.4	133.0		
+40									5.1	129.3
+50					12.7	121.7	10.5	123.9	6.4	128.0
+75							14.7	119.7		
1+							13.7	120.7	6.6	127.8
+50									7.2	127.2
2+									10.9	123.5
	0.01	121.40	13.04	121.39						
0+80					8.3	113.1				
1+					7.8	113.6				
+20					6.2	115.2				
+50					7.1	114.3	0.7	120.7		
+90					11.0	110.4				

		27TH ST.									
		121.40				E.L.		C.L.		W.L.	
2+						10.9	110.5	5.4	116.0		
+10						10.4	111.0				
+20						12.4	109.0				
+25								6.4	115.0		
+50						13.0	108.4	10.1	111.3	2.8	118.6
+75						15.8	105.6				
+90										7.6	113.8
3	SOUTH LINE		"H"			12.8	108.6	13.4	108.0	9.6	111.8
			12.80	108.60		S.E. 27TH & "H" ON PLUG					
	12.775	134.165	0.01	121.39							
	12.89	147.005	0.05	134.115							
	13.00	159.705	0.30	146.705							
	13.06	172.495	0.27	159.435							
	3.53	176.01	0.015	172.48							
	0.68	163.95	12.74	163.27							
			1.92	162.03		S.E. 26TH & "H" ON PLUG					

26TH ST.

"H" — "K"

12/19/05

{COVERT
WETMORE
MOORE.

	1.92	163.95		162.03
0 =	SOUTH LINE "H" ST.			
+53.5				
	5.16	157.65	11.46	152.49
0+53.5				
1+03.5				
+53.5				
2+03.5				
+53.5				
	4.50	152.08	10.07	147.58
+53.5				
3+03.5	= NORTH LINE "I" ST			
	10 FT. SOUTH OF N.L.			
	CENTER LINE "I" ST			
	15' S. OF C.L.			
0 =	SOUTH LINE "I" ST.			
+20				

E.L		C.L		W.L	
S. E. COR.		26TH & "H" ON PLUG.			
1.9	162.0	7.7	156.2	13.1	150.8
4.4	159.5	10.5	153.4		
				9.3	148.3
+0.6	158.2	5.5	152.1	10.9	146.7
1.1	156.5	7.4	150.2	11.9	145.7
1.8	155.8	7.2	150.4	13.6	144.0
4.9	152.7	11.2	146.4		
				10.7	141.4
1.5	150.6	7.1	145.0	11.6	140.5
		8.5	143.6		
4.0	148.1	7.6	144.5	12.2	139.9
2.3	149.8				
2.1	150.0	8.5	143.6	12.4	139.7
		6.6	145.5	11.5	140.6

						E.L.		C.L.		W.L.	
		26TH ST.									
		152.08									
+30										12.4	139.7
			1.29	150.79		N.E.	COR.	26TH &	"I"	ON PLUG	
+50						1.0	151.1	7.3	144.8	11.6	140.5
+70						0.0	152.1				
1+						0.8	151.3	6.0	146.1	9.8	142.3
+15								5.1	147.0		
+25						2.6	149.5				
+50						2.0	150.1	5.9	146.2	10.6	141.5
+80						0.8	151.3				
2+0						2.4	149.7	6.6	145.5	11.2	140.9
+35						3.8	148.3				
+50						4.2	147.9	7.6	144.5	12.1	140.0
+85								9.2	142.9		
3	= NORTH	LINE	"J"			6.0	146.1	11.0	141.1	14.7	137.4
	CEN.	LINE	"J"			10.1	142.0				
	-0.075	139.185	12.82	139.26							
	C.L.	"J"						1.9	137.3	5.2	134.0
0	S.L.	"J"				1.2	138.0	4.9	134.3	7.8	131.4

	26TH ST.				
		139.185			
			6.255	132.92	
+50					
	0.05	126.35	12.88	126.300	
1					
+50					
	0.67	114.19	12.83	113.52	
2					
	0.61	101.92	12.88	101.31	
+50					
+96					
3					
	8.15	105.26	4.81	97.11	
OK.			4.27	100.99	100.96 100.99 .03

EL		C.L		DV.L	
S.W. 26TH & "J" SPIKE NEW PHONE POLE					
7.8	131.4	10.8	128.4	13.5	125.7
1.8	124.5	4.1	122.2	5.8	120.5
10.0	116.3	12.4	113.9	14.1	112.2
7.5	106.7	9.6	104.6	9.9	104.3
2.2	99.7	4.3	97.6	5.1	96.8
6.7	95.2	11.1	90.8	11.4	90.5
9.9	92.0	12.0	89.9	12.8	89.1
S.E. 27TH & "K" SPIKE IN FENCE COR.					

HOITT ST
~~SHORT 29TH ST.~~

"K" — "H"

12/20/05

{ COVERT
WETMORE
MOORE

	12.90	93.36		80.46
			11.23	82.13
0	= H. L.	"K"		
+50				
1				
+30				
+50				
	12.865	105.810	0.415	92.945
+50				
2				
+50				
	12.96	118.55	0.22	105.59
+50				
+75				
+80				
3				
	6.56	124.86	0.245	118.305

E.L		C.L		W.L	
S.W. COR. REED'S 29TH & "K"					
N.E. COR. 28TH & "K"					
7.0	86.4	6.2	87.2	6.7	86.7
5.6	87.8	5.3	88.1	5.2	88.2
3.6	89.8	3.0	90.4	3.3	90.1
2.0	91.4				
				1.0	92.4
11.9	93.9	11.8	94.0		
5.3	100.5	6.2	100.6	8.9	96.9
				3.6	102.2
7.9	110.7	11.6	107.0		
1.4	117.2				
				13.5	105.1
		3.5	115.1	12.7	105.9

(SHORT 29TH ST)

HOITT ST

		124.86^5		
3+				
+8.4	= S.L.	"J"		
	25 = N OF S.L.			
	C.L.	"J"		
			4.28	120.58
0 =	N.L.	"J"		
+50				
	0.03	111.93^5	12.96	111.90^5
0	S.L.	"J"		
	C.L.	"J"		
	30 N. OF C.L.			
0	N.L.	"J"		
+50				
1				
+35				
+50				
	2.57	101.97	12.53^5	99.40
0+50				

E.L.		C.L.		W.L	
3.7	121.2				
2.6.	122.3	8.7	116.2		
0.6	124.3				
0.6	124.3	8.9	116.0		
N.E.	COR. "J" & 29TH				
4.3	120.6				
11.7	113.2				
				6.2	105.7
				7.1	104.8
				7.0	104.9
		0.2	111.7	10.5	101.4
		7.8	104.1		
6.3	105.6				
8.5	103.4				
12.8	99.1				
				7.1	94.9

(SHORT 29TH ST)
HOITT ST

101.97

	F.L.		C.L		W.L	
+70					8.9	93.1
1+			4.6	97.4	8.6	93.4
+20					10.1	91.9
+22					12.6	89.4
+40					13.0	89.0
+41					10.5	91.5
+50			8.4	93.6	10.5	91.5
+79			8.9	93.1		
+80			11.2	90.8		
2+	7.5	94.5	11.5	90.5	9.2	91.8
+20			11.7	90.9		
+25			9.1	92.9		
+49	7.4	94.6				
+50	8.4	93.6	8.7	93.3	3.3	98.7
+60	11.0	91.0				
+65	7.4	94.6				
+70			8.5	93.5		

(SHORT 29TH ST.)
(HOITT)

		101.97		
+95				
+85				
3+00.33 =	S. L. "I."			
			8.01⁵	93.95⁵
+10				
	C. L. "I"			
	12.98	114.91	0.04	101.93
	S. L. "I"			
	C. L. "I."			
	N. L. "I"			
	13.03	127.71	0.23	114.68
0	N. L. — "I"			
+50				
	13.08	140.45	0.34	127.37
1				
+50				
	8.97	149.32	0.10	140.35

E.L.		C.L.		W.L	
7.0	95.0				
		2.6	99.4		
8.0	94.0	0.2	101.8		
S.E. SH 29TH & "I" ON PLUG					
7.1	94.9				
1.4	100.6				
				7.5	107.4
		5.9	109.0	1.2	113.7
7.4	107.5				
		12.1	115.6	8.5	119.2
8.1	119.6	3.8	123.9	0.0	127.7
12.2	128.3	8.1	132.4	5.5	135.0
3.0	137.5	1.3	139.5		

(SHORT 29TH ST)

HOITT ST

		149.32			
1+50					
2					
+50					
+ 91.8	= S. L.-"H"				
+92.35	= S. L.-"H"				
+92.85	= S. L-"H"				
			0.91	148.41	
	0.10	136.74	12.68	136.64	
	0.04	123.86	12.92	123.82	
	0.42	111.46	12.84	111.02	
CK			2.34	109.12	109.08 109.12 .04

E.L.		C.L		W.L	
				8.1	141.2
6.1	143.2	5.4	143.9	5.7	143.6
3.2	146.1	3.1	146.2	3.8	145.5
				1.6	147.7
		2.6	146.7		
0.9	148.4				

S.E.SH 29TH & "H" ON PLUG

S.E. 28TH & "H" ON PLUG

28TH. ST.

COVERTI
WESTMORE
MOORE.

12/20/05

9.47 91.60 82.13

0 = N. L. "K"

+30

+35

+40

+50

+75
+85
+90
+95

1+

+02

+05

+10

+25

+50

+85

+90

2+

E. L.		C. L.		W. L	
N.E 28TH & K ON PLUG					
9.5	82.1	10.5	81.1	11.0	80.6
				11.9	79.7
				13.0	78.6
				11.9	79.7
9.0	82.6	10.0	81.6	10.6	81.0
10.3	81.3	10.6 11.8	81.0 79.8		
9.5	82.1	10.3	81.3		
10.4	81.2	9.9	81.7	8.3	83.3
11.4	80.2				
11.1	80.5				
10.0	81.6				
				5.8	85.8
8.4	83.2	7.4	84.2	5.6	86.0
8.3	83.3				
9.7	81.9	7.0	84.6		
7.9	83.7	8.5	83.1	5.2	86.4

28TH ST

+10
+20
+50
3
+11.5 = S.L. "J"
+51.5 = C.L. "J"
+65
+70
+91.5 = H.L. "J"
4+
+10
+15
+20
+45
+50
+60
+80

E.L.		C.L.		W.L.	
		9.0	82.6		
		7.7	83.9		
6.0	85.6	7.1	84.5	5.5	86.1
4.9	86.7	5.6	86.0	5.5	86.1
4.6	87.0	5.4	86.2	5.4	86.2
4.1	87.5	4.9	86.7	5.1	86.5
				5.0	86.6
				6.8	84.8
2.6	89.0	3.7	87.9	6.2	85.4
2.4	89.2	3.9	87.7	4.8	86.8
		3.7	87.9		
		5.4	86.2		
		4.3	87.3		
		3.9	87.7		
0.7	90.9	4.5	87.1	3.1	88.5
		1.3	90.3		
				3.8	87.8

	28TH ST.				E.L.		C.L.		W.L	
+85									1.0	90.6
5+									0.7	90.9
	10.60	101.78	0.42	91.18						
5+					9.3	92.5	9.8	92.0		
+50					7.8	94.0	8.4	93.4	8.6	93.2
6+					4.8	97.0	6.0	95.8	6.8	95.0
+50					1.8	100.0	3.8	98.0	5.3	96.5
+80	= S.L. "I"								4.3	97.5
7+							1.7	100.1	3.5	98.3
	12.80	110.25	4.33	97.45	S.W. COR 28TH & "I" ON 1"X2" PLUG					
~~6+~~ 91.5	S.L. "I"				6.3	104.0				
7+					5.5	104.8				
+31.5	C.L. "I."				2.7	107.6				
+20									11.8	98.5
+50					1.9	108.4	7.5	102.8	13.0	97.3
+60	= N.L. "I"								13.7	96.6
+71.5	= N.L. "I"				1.6	108.7				

	28TH ST.				
+95					
8+0					
+05					
+50					
+55					
+60					
+65					
9+0					
+50					
+75					
+80					
+90					
10+0					
+50					
+61.3 = S. L. "H"			1.17	10 109.08	

E.L		C.L		W.L	
				14.5	95.8
0.9	109.4	10.4	99.9	16.1	94.2
				14.4	95.9
2.2	108.1	10.5	99.8	12.7	97.6
				13.2	97.1
				14.7	95.6
				12.7	97.6
0.5	109.8	7.8	102.5	11.7	98.6
0.0	110.3	7.5	102.8	10.3	100.0
				9.7	100.6
				11.3	99.0
				9.8	100.5
R.R. +0.7	111.0	5.9	104.4	9.5	100.8
1.3	109.0	6.2	104.1	7.8	102.5
1.2	109.1	6.5	103.8	7.3	103.0

S.E 28TH & "H" ON PLUG

OLD 29TH ST.

"N" — "L"

12/21/05

COVERT
WETMORE
MOORE

	4.45	75.78		71.33
0 =	NORTH	LINE	OF "N"	ST.
+50				
+65				
+80				
1+				
+50				
2+0				
+50				
+99				
3+	= SOUTH	LINE	OF "M"	ST.
	= CENTER	"	" "	"
0 =	= NORTH	"	" "	"
+ 01				
	10.31	81.64	4.45	71.33
+ 50				
1+				

E.L.		C.L.		W.L.	
N.W. COR. OLD 29TH & "M" SPIKE IN ELEC. POLE					
9.0	66.8	8.6	67.2	9.4	66.4
7.2	68.6	7.4	68.4	7.6	68.2
		7.0	68.8		
		6.0	69.8		
5.7	70.1	6.6	69.2	6.8	69.0
6.6	69.2	6.4	69.4	6.5	69.3
5.5	70.3	5.5	70.3	5.4	70.4
4.4	71.4	4.6	71.2	5.2	70.6
3.3	72.5	3.6	72.2	4.4	71.4
4.8	71.0	5.4	70.4	5.6	70.2
4.6	71.2	4.9	70.9	5.3	70.5
4.0	71.8	4.6	71.2	4.7	71.1
2.0	73.8	2.8	73.0	3.1	72.7
8.0	73.6	8.2	73.4	8.7	72.9
8.6	73.0	9.3	72.3	9.9	71.7

		E.L.		C.L.		W.L.	
	OLD 29TH ST						
	81.64						
+30						9.6	72.0
+32						11.6	70.0
+50		9.2	72.4	9.1	72.5	11.2	70.4
+65						9.6	72.0
+85				8.9	72.7		
+87				10.6	71.0		
2+		8.1	73.5	10.8	70.8	8.4	73.2
+15				10.2	71.4	8.8	72.8
+20				8.4	73.2		
+25		7.8	73.8			6.6	75.0
+30		9.4	72.2				
+50		9.8	71.8	6.4	75.2	5.5	76.1
+90		9.7	71.9				
3+	= SOUTH LINE "L" ST.	7.7	73.9	4.3	77.3	4.7	76.9
	CENTER " "	4.9	76.7	3.6	78.0	3.9	77.7
0 =	NORTH " "	3.8	77.8	3.2	78.4	3.4	78.2
+40						3.4	78.2
+50		2.5	79.1	2.1	79.5	4.4	77.2

OLD 29TH ST.

81.64

+80

1 +

+50 = S.L. ALLEY.

+61 = N.L. OF ALLEY.

E.L.		C.L.		W.L.	
		2.0	79.6		
2.0	79.6	2.9	78.7	4.4	77.2
2.0	79.6	3.8	77.8	3.5	78.1
1.6	80.0	3.3	78.3	3.1	78.5

28TH ST. (EVANS)

"N" — "L"

12/21/05 {COVERT, WETMORE, MOORE.

	2.67	71.93		69.26
0. =	NORTH LINE "N" ST.			
+ 10				
+ 50				
+ 60				
1+				
+ 25				
+ 40				
+ 50				
+ 70				
2+				
+ 50				
+ 99				
3+ =	SOUTH LINE "M" ST.			
	CENTER " " "			
0	NORTH " " "			
	8.12	77.38	2.67	69.26

E.L		C.L.		W.	
N.E. EVANS & "M" SPIKE IN ELEC. POLE.					
8.6	63.3	8.8	63.1	8.1	63.8
				8.8	63.1
5.9	66.0	7.3	64.6	6.9	65.0
				5.9	66.0
5.0	66.9	6.3	65.6	5.5	66.4
				6.5	65.4
				6.0	65.9
5.1	66.8	6.3	65.6	6.7	65.2
				6.6	66.3
4.0	67.9	4.7	67.2	4.7	67.2
3.2	68.7	3.6	68.3	3.6	68.3
2.5	69.4	3.1	68.8	3.3	68.6
3.6	68.3	4.4	67.5	4.7	67.2
3.6	68.3	4.1	67.8	4.6	67.3
3.1	68.8	3.9	68.0	3.9	68.0

	28TH (EVANS) ST.				E.L.		C.L.		W.L.	
		77.38								
+01					7.9	69.5	7.7	69.7		
+25									8.5	68.9
+35					7.7	69.7				
+40					9.3	68.1	8.3	69.1		
+45							10.2			
+50					9.6	67.8	10.1	67.3	10.3	67.1
+70					9.5	67.9				
+80					8.0	69.4	8.9	68.5		
1+					8.0	69.4	8.5	68.9	9.1	68.3
+50					8.2	69.2	8.1	69.3	6.7	70.7
2+					6.2	71.2	5.5	71.9	5.1	72.3
+20							4.3	73.1		
+50					4.4	73.0	3.9	73.5	3.9	73.5
+7.5									4.1	73.3
3+	= SOUTH LINE "L" ST.				3.0	74.4	2.7	74.7	2.6	74.8
	CENTER " " "				2.1	75.3	1.7	75.7	1.5	75.9
0	9.38	85.76	1.00	76.38						
0	NORTH LINE "L" ST				8.6	77.2	8.8	77.0	8.0	77.8

(2874) EVANS ST

85.76

+50

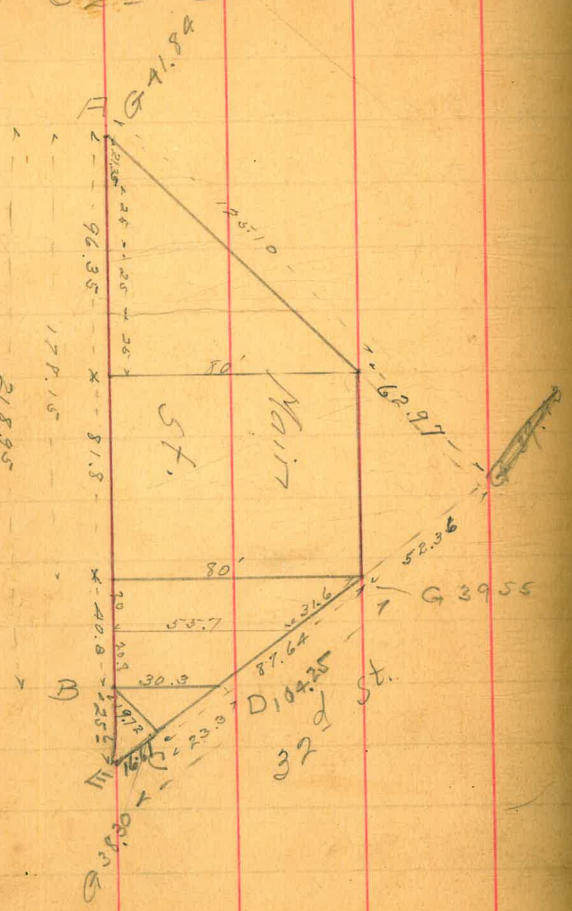
1+

+50 =

+61

E.L		C.L		W.L	
6.3	79.5	6.6	79.2	6.7	79.1
4.4	81.4	4.3	81.5	3.8	82.0
1.3	84.5	1.4	84.4	0.7	85.1
0.8	85.0	0.0	85.8	0.4	85.4

Cross-sections of Main St near 32d



2/4/06 {Hatch, Haslam, Moore}

NE Cor 31st & Main

BM	386	49.60		45.74	
"A"			5.4	44.2	
	10' E of "A"				
S			3.0	46.6	
N.			6.4	43.2	
	21.35 E of A				
S			2.9	46.7	
7'			3.9	45.7	
cb.			6.7	42.9	
N 16'			6.8	42.8	
	46.35 E of A				
S			2.4	47.2	
cb.			3.5	46.1	
19'			7.7	41.9	
1/4			7.8	41.8	
38' N			7.5	42.1	

		49.60		
	71.35 E of A.			
5			2.4	47.2
5'			2.9	46.7
12'			6.9	42.7
cb.			7.1	42.5
19			7.5	42.1
25			9.4	40.2
1/4			9.4	40.2
c			8.6	41.0
50			8.2	41.4
1/4			8.4	41.2
57' N			8.6	41.0
T.P.	6.38	47.23	8.75	40.85
	96.35' E of "A"			
5			2.1	45.1
10			1.9	45.3

		47.23		
cb.			2.4	44.8
20'			4.6	42.6
23			7.6	39.6
1/4			7.8	39.4
c			7.6	39.6
45			7.6	39.6
49			6.0	41.2
1/4			6.7	40.5
64			7.0	40.2
cb.			5.7	41.5
N			7.1	40.1
	121.35' E of "A"			
5			1.4	45.8
8'			1.4	45.8
cb.			3.4	43.8
20			4.0	43.2

47.23

23	8.6	38.6	
1/4	8.7	38.5	
C	8.4	38.8	
45	8.5	38.7	
48	6.4	40.8	
1/4	7.5	39.7	
Cb.	7.4	39.8	
68	6.4	40.8	
N.	7.6	39.6	

146.35 E of A.

5	1.7	45.5	
9'	1.7	45.5	
Cb.	2.3	44.9	
21	3.8	43.4	
24	9.4	37.8	
1/4	9.4	37.8	

47.23

Cr	9.4	37.8	
45	9.4	37.8	
48	5.6	41.6	
51	7.1	40.1	
1/4	7.3	39.9	
Cb.	8.0	39.2	
69	7.2	40.0	
N.	8.3	38.9	

178.15 E of "A"

5	1.5	45.4	
9'	2.2	45.8	
Cb.	3.5	43.7	
19	4.3	42.9	
24	10.7	36.5	
1/4	10.8	36.4	
Cr	10.8	36.4	

47.23

45	10.4	36.8
49	6.3	40.9
1/4	7.9	39.3
cb	8.5	38.4
N	8.5	38.4
198.15 E of "A"		
5	2.4	44.5
10	2.8	44.4
cb.	3.9	43.3
20	4.5	42.7
23	11.0	36.2
24	11.4	35.8
1/4	11.3	35.9
C	11.4	35.8
45	11.1	36.1
49	6.7	40.5

47.23

1/4	7.9	39.3
55.7 N	8.7	38.5
218.95 Line B-D.		
B.	3.1	44.1
10	3.5	43.7
cb.	4.8	42.4
21	5.5	41.7
23	12.0	35.2
1/4	12.4	34.8
30.3 D	12.3	34.9
Line D-C		
C	4.7	42.5
10	5.7	41.5
13	12.2	35.0
D	12.3	34.9
E	3.8	43.4

National Ave
N – 12th

BM.	4.20	8.87		4.67
	295	7.33	4.57	4.35

A	6.2	1.1
36' W. of A.	5.7	1.6
B.	4.9	2.4
B – C		
C	5.6	1.7
Ch.	5.4	1.9
E Ch. of 14		
N	5.5	1.8

2/20/06 Hotel Brook-more

7.83

Ch.	5.0	2.3
1/4	4.4	2.9
43' = N Line N.	3.9	3.4
E 1/4 14th		
54' = N Line N.	4.4	2.9
C	4.4	2.9
1/C	5.0	2.3
Ch.	5.3	2.0
N	5.6	1.7
Cr. 14th		
N	5.2	2.1
Ch	5.4	1.9
14	5.3	2.0
C	5.0	2.3
65' = N. line N.	4.4	2.9

733

W 1/4 14th St

76 = N line of N.	5.5	1.8
1/4	5.2	2.1
C	5.3	2.0
1/4	5.2	2.1
cb.	5.2	2.1
N.	5.2	2.1

W Cb. 14th

N.	4.9	2.4
cb.	5.0	2.3
1/4	5.0	2.3
C	5.3	2.0
1/4	5.1	2.2
Cb.	5.3	2.0
86' = N. line of N.	5.3	2.0

733

W. Line of 14th

98' = N. line of N.	5.1	2.2
cb	5.0	2.3
1/4	4.9	2.4
C	5.2	2.1
1/4	4.8	2.5
cb	4.7	2.6
N. = "F"	4.6	2.7
"E"	4.7	2.6

F – G

G	5.0	2.3
cb.	4.9	2.4
1/4	4.8	2.5
C	5.0	2.3
1/4	4.8	2.5
cb.	4.8	2.5
F	4.6	2.7

7.33

50' W of 14th (line E-G)

N	4.5	2.8
cb.	4.6	2.7
1/4	4.4	2.9
c	4.6	2.7
1/4	4.7	2.6
cb.	4.7	2.6
S	4.8	2.5

100' W of 14th (E.F. line)

S	4.8	2.5
cb	4.7	2.6
1/4	4.7	2.6
c	4.5	2.8
1/4	4.4	2.9
cb.	4.1	3.2
N	4.1	3.2

7.33

125' W of 14th

N.	5.0	2.3
cb.	5.3	2.0
1/4	5.5	1.8
c	4.6	2.7
1/4	4.7	2.6
cb.	4.5	2.8
S	4.7	2.6

150' W of 14th

S	6.7	0.6
cb	6.4	0.9
1/4	6.0	1.3
c	5.5	1.8
1/4	5.7	1.6
cb	6.0	1.3
N	6.2	1.1

7.33

175' W of ~~14th~~ G.F.

N	6.5	0.8
cb.	6.5	0.8
1/4	6.4	0.9
c	6.0	1.3
1/4	5.5	1.8
cb.	4.3	3.0
S	4.2	3.1

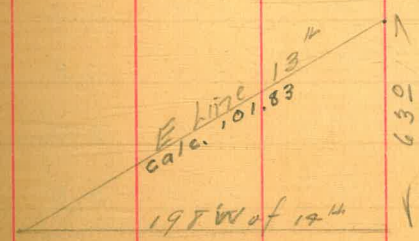
186' W of 14th G.F.

S	8.5	-1.2
cb.	8.9	-1.6
1/4	7.3	0.0
c	7.2	0.1
1/4	6.6	0.7
cb.	6.5	0.8
N	6.6	0.7

7.33

198' W of 14th

N	3.8	3.5
cb.	4.5	2.5
1/4	5.0	2.3
c	5.1	2.2
1/4	5.1	2.2
cb.	4.7	2.6
S	4.7	2.6



7.33

E Line 13th

S	4.7	2.6
Ch.	4.8	2.5
1/4	4.5	2.8
C	4.5	2.8
1/4	4.1	3.2
Ch.	4.3	3.0
N	4.0	3.3

E Ch. 13th

S	5.0	2.3
Ch	4.5	2.8
1/4	4.6	2.7
C	4.3	3.0
1/4	4.5	2.8
Ch.	4.9	2.4
N	4.8	2.5

7.33

E 1/4 13th

N	4.9	2.4
Ch.	4.8	2.5
1/4	4.6	2.7
C	4.6	2.7
1/4	4.7	2.6
Ch	4.4	2.9
S	4.8	2.5

Cr. 13th

S	4.2	3.1
Ch	4.3	3.0
1/4	4.3	3.0
C	4.5	2.8
1/4	4.6	2.7
Ch.	4.6	2.7
N	4.4	2.9

7.33

Top of Rail N.	4.32	3.01
" " " S	4.15	3.18

3' W of Cr. of 13th

N	4.4	2.9
Cb.	4.6	2.7
1/4	4.6	2.7
C	4.5	2.8
1/4	4.3	3.0
Cb.	4.3	3.0
S	4.2	3.1

W 1/4 13th

N. = 97'	4.9	2.4
Cb	5.4	1.9
1/4	5.6	1.7
C	5.5	1.8
1/4	5.4	1.9

7.33

Cb.	5.0	2.3
S	5.1	2.2

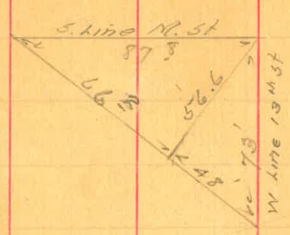
W Cb. 13th

S	5.4	1.9
Cb.	5.5	1.8
1/4	5.7	1.6
C	5.8	1.5
1/4	5.4	1.9
Cb.	5.5	1.8
N = 86'	5.3	2.0

W LINE 13th

N = 73'	4.8	2.5
1/4	5.6	1.7
C	6.0	1.3
1/4	5.7	1.6
Cb.	5.7	1.6
S	6.3	1.1

T.P.	5.10	7.33 / 8.06	4.37	2.96



Line bet. Triangles –

S			6.7	1.4
ab			6.1	2.0
1/4			6.0	2.1
C			6.0	2.1
1/4			5.3	2.8
56.6 = SW Cor. 13th M.			5.6	2.5

S Line of M.

SW Cor. 13th M			5.6	2.5
Cr.			5.5	2.6
1/4			5.9	2.2
ab			5.6	2.5
S			5.9	2.2

6.9 / 1.2 El. of water level

BM			0.46	7.60

66.2
48
114.2

Sargent Ave.

28th — 32d.

	6.95	92.78		85.83
E line 28th				
50' E of 28th				
100' " " "				
150' " " "				
165' " " "				
180' " " "				
200' " "				
T.P.	12.26	103.88	1.16	91.62
250' " "				
300' " "				
325' " "				
350' " "				
400' " "				
T.P.	2.40	100.17	6.31	97.57
400' " "				

2/22/06 Hatch Brooks Hawkins

N R.	N Elev	C R.	C Elev	S R.	S Elev
5.2	84.6	6.7	86.1	5.4	87.4
7.3	85.5	6.7	86.1	3.6	89.2
6.2	86.6	5.0	87.8	1.8	91.0
5.2	87.6	4.3	88.5	1.4	91.4
—		—		0.3	92.5
—		—		1.3	91.5
3.2	89.6	2.5	90.3	0.6	92.2
10.0	93.9	9.5	94.4	7.8	96.1
6.9	97.0	3.3	100.6	2.9	101.0
—		2.0	101.9	—	
6.7	97.2	2.8	101.1	2.4	101.5
—		8.7	95.2	4.5	99.4
7.8	92.4	—		—	

100.17

412' E of 28

438' " " "

450' " " "

475' " " "

500' " " "

550' " " "

600' " " " = W Line 29th

Cr. 29th (Note- 29th is 60' wide)

T.P. 10.30 97.66 12.51 87.36

E Line of 29th

50' E of 29th

65 " " "

100' " " "

150' " " "

200' " " "

250 " " "

N		C		S	
—		—		0.3	99.9
—		—		2.6	97.6
10.2	90.0	6.7	93.5	2.3	97.9
—		—		1.4	98.8
9.9	90.3	8.6	91.6	2.5	97.7
12.5	87.7	10.5	89.7	5.7	94.5
13.3	86.9	11.2	89.0	7.5	92.7
13.8	86.4	11.1	89.1	8.5	91.7
11.3	86.4	8.7	89.0	6.6	91.1
10.5	87.2	8.9	88.8	6.5	91.2
11.8	85.9	—		—	
12.1	85.6	10.0	87.7	8.3	89.4
13.1	84.6	11.2	86.5	9.0	88.7
14.7	83.0	12.3	85.4	10.6	87.1
13.8	83.9	11.3	86.4	9.8	87.9

		97.66			
300' E of 29th					
350' " " "					
370' " " "					
400' " " "					
425' " " "					
450' " " "					
475' " " "					
500 " " "					
550' " " "					
600' " " " = W Line 30th					
BM 30th	1.26	86.32	12.60	85.06	85.08
Or 30th (Note - 30th is 80' wide)					
E Line of 30th					
50 " " "					
100' " " "					
T.P.	0.07	73.54	12.85	73.47	

N		C		S	
13.2	84.5	10.6	87.1	8.7	89.0
10.4	87.3	8.7	89.0	6.2	91.5
—		—		5.3	92.4
7.3	90.4	4.9	92.8	3.4	94.3
—		—		2.6	95.1
3.7	94.0	3.3	94.4	2.9	94.8
3.2	94.5	—			
3.9	93.8	4.5	93.2	4.3	93.4
6.5	91.2	6.5	91.2	6.3	91.4
10.6	87.1	10.3	87.4	10.3	87.4
2.0	84.3	1.4	84.9	2.7	83.6
4.8	81.5	3.8	82.5	5.0	81.3
9.0	77.3	8.9	77.4	9.7	76.6
11.3	75.0	13.0	73.3	15.5	70.8

							N		C		S
		73.54									
150	E of 30th						1.6	71.9	5.4	68.1	7.5	65.7
200'	" " "						2.1	71.4	5.5	68.0	10.1	63.4
250	" " "						7.0	66.5	11.0	62.5	13.0	60.5
300'	" " "						9.5	64.0	11.5	62.0	16.0	57.5
T.P.	0.55	60.91	13.18	60.36								
350'	" " "						2.4	58.5	2.2	58.7	6.9	54.0
400	" " "						7.9	53.0	5.3	55.6	9.0	51.9
425'	" " "						—		8.7	52.2	12.4	48.5
450'	" " "						17.1	43.8	16.2	44.7	16.7	44.2
460'	" " "						16.9	44.0	—		—	
465'	" " "						—		18.0	42.9	18.2	42.7
470	" " "						11.3	49.6	—		—	
495'	" " "						—		—		16.3	44.6
500'	" " "						8.1	52.8	10.4	50.5	14.9	46.0
520	" " "						—		4.0	56.9	9.7	51.2
550	" " "						40.5	61.4	1.2	59.7	6.1	54.8

		60.91		
T.P.	6.61	66.02	1.50	59.41
570	E of 30th St.			
600'	" " " = W Line 31st			
15'	E of W Line			
20'	" " " "			
Cr. (top of Rail.)	Ry. is Cr. of Street)			
38	E of W Line -			
45'	" " " "			
50	" " " "			
E Line 31st				
30' E of E Line of 31st				
BM 31st			2.83	63.19 63.19
50' E of 31st				
TP	9.08	73.71	1.39	64.63
100'	" " "			
150'	" " "			

N C S

—		4.8	61.2	10.5	55.5
1.8	64.2	5.1	60.9	11.9	54.1
3.0	63.0	6.7	59.3	—	
9.1	56.9	9.7	56.3	14.6	51.4
8.3.3	57.7			10.24	55.8
9.2	56.8	9.7	56.3	11.2	54.8
5.5	60.5	—		—	
—		9.7	56.3	0.9	65.1
4.1	61.9	7.4	58.6	8.4	57.6
—		2.5	63.5	3.3	62.7
0.4	65.6	1.2	64.8	2.3	63.7
5.5	68.2	7.1	66.6	8.0	657
7.4	69.3	5.3	68.4	5.9	67.8

		73.71			
200'	E of 31st				
250'	" " "				
277'	" " "				
300'	" " "				
330'	" " "				
350'	" " "				
370'	" " "				
380'	" " "				
390'	" " "				
400'	" " "				
410'	" " "				
415'	" " "				
430'	" " "				
450'	" " "				
T.P.	5.97	76.83	2.85	70.86	

N		C		S	
2.8	70.9	4.2	69.5	5.4	68.3
1.7	72.0	3.6	70.1	5.6	68.1
3.1	70.6	3.3	70.4	6.4	67.3
6.9	66.8	7.9	65.8	12.2	61.5
13.0	60.7	14.0	59.7	15.7	58.0
13.0	60.7	13.4	60.3	15.0	58.7
—		—		13.4	60.3
—		12.2	61.5	—	
10.5	63.2	—		—	
8.8	64.9	5.3	68.4	6.0	67.7
—		3.0	70.7	—	
—		—		2.6	71.1
1.6	72.1	—		—	
0.9	72.8	2.0	71.7	2.2	71.5

						N		C		S	
		76.83									
500'	E of	31st				2.4	74.4	4.4	72.4	5.1	71.7
550'	" "	"				1.7	75.1	2.9	73.9	3.8	73.0
600'	" "	" = W Line 32d				2.2	74.6	3.0	73.8	3.3	73.5

Levels over Ctr Line of I St from Ctr 27th to Ctr. 29th.

	+	141.	–		
	12.85	110.30			97.45
	12.98	122.94	0.34	109.96	
	12.85	135.21	0.58	122.36	
	6.22	141.26	0.17	135.04	
0 = Ctr 27th St.			+0.5	141.76	
+30 = 00 = E.L. 27th			2.1	139.2	
+25			3.8	137.5	
+50			10.1	131.2	
T.P.	0.13	128.61	12.78	128.48	
+75			1.7	126.9	
1+00			6.0	122.6	
+25			10.8	117.8	
T.P.	1.13	117.15	12.59	116.02	
1+50			5.3	111.9	
+75			12.1	105.1	
T.P.	1.40	107.39	11.16	105.99	

107.39

1+00	5.5	101.9	
+20	7.4	100.0	
+25	8.9	98.5	
+37	11.00	96.4	
+50	9.3	98.1	
+75	7.3	100.1	
2+00	7.1	100.3	
+25	6.1	101.3	
+50	5.8	101.6	
+75	5.4	102.0	
4+00	6.0	101.4	
+25	6.5	102.1	
+50	7.0	100.4	
+75	9.8	97.6	
5+00	12.6	94.8	
+25	13.2	94.2	

		107.39		
5+34			13.6	93.8
+39			15.1	92.3
+43			14.0	93.4
+50			13.2	94.2
+75			11.1	96.3
6+03 = W.L. 28th			8.7	98.7
+34 = Ctr		"	6.3	101.1
+68 = E.L.		" = 0+00	0.8	106.6
T.P.	12.62	118.71	1.30	106.09
+25			9.5	109.2
+50			4.6	114.1
+75			3.2	115.5
1+00			2.6	116.1
+25			2.6	116.1
+50			3.3	115.4
+75			4.2	114.5

2+00 = W.L. Hoitt			5.2	113.5
+40 = Ctr			10.4	108.3
T.P	0.74	108.09	11.36	107.35
+80 EL. = 0+00 "			7.6	100.5
+25			9.5	98.6
+50			10.8	97.3
+75			11.7	96.4
+90			11.7	96.4
+92			13.9	94.2
1+00			13.6	94.5
+05			11.6	96.5
+25			10.4	97.7
+50			8.2	99.9
+75			5.3	102.8
2+00 = W.L. 29th			1.1	107.0
T.P	7.09	114.18	1.00	107.09
+40 - Ctr 29th			0.0	114.18

Crossection of
23d st "A to B" POSTED

	0.07	179.86		179.79	BM 24th & B
TP	3,98	171.39	12.45	167.41	
	N Line		B St		
WL			7,85	163.5	Check on Grade Stake
Cb	(23 st 50 wide)		8,2	163.2	
1/4			8.1	163.3	
C			7,5	163.9	
1/4			7,5	163.9	
Cb			6,9	164.5	
EL			5,9	165.5	
		50'	North		

Intersection of B st Graded

Clough } Sept 5-06.
Bolles
Taylor

		50'	North	
Edin			6,7	164.7
Cb			7,4	164.0
1/4			7,7	163.7
C			8,0	163.4
1/4			8.3	163.1
Cb			8,1	163.3
WL			8,0	163.4
		100'	North	
WL			8 0	163.4
Cb			8,2	163.2
1/4			8,0	163.4
C			7,1	164.3
1/4			6,7	164.7
Cb			6,2	165.2
EL			5,8	165.6

171.39

	150' North	
E2	4.5	166.9
bb	5.2	166.2
1/4	6.2	165.2
b	6.6	164.8
1/4	7.4	164.0
bb	8.1	163.3
W2	8.3	163.1
	200' North	
W2	8.0	163.4
bb	7.5	163.9
1/4	6.8	164.6
b	5.9	165.5
1/4	5.8	165.6
bb	4.4	167.0
E Line	4.0	167.4

	250' North	
E2	3.5	167.9
bb	4.4	167.0
1/4	5.5	165.9
b	5.6	165.8
1/4	6.1	165.3
bb	6.8	164.6
W2	7.5	163.9
	275' North	
W2	7.1	164.3
bb	6.7	164.7
1/4	6.6	164.8
b	6.0	165.4
1/4	5.9	165.5
bb	4.8	166.6
E2	3.8	167.6

17139

302' north

POSTED

Shin A st

E EL		7,4	164.0
Cb		7,8	163.6
1/4		7,9	163.5
C		8,0	163.4
1/4		8,2	163.2
Cb		8,3	163.1
WL		8,5	162.9

Crossection of National Ave (80') from N Line of N to W Line of 13th St

	4.16	8.26		4.10 BM	Sp N W Cor 16 + National
TP	3.36	7.52	4.10	4.16	
	N Line of N St				
WL			4.2	3.3	
bl			4.5	3.0	
4			4.6	2.9	
b			4.2	3.3	
4			4.0	3.5	
bl			3.8	3.7	
EL			4.0	3.5	
+39' E = N L of National			5.3	2.3	

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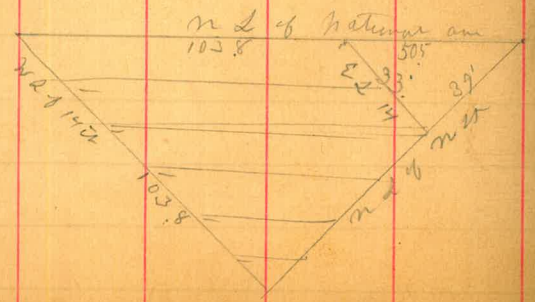

7.52 National ave

N Line of National ave

50.5' W of point on N Line of N St

= E Line of 14th St	6.0	1.5
bl	5.6	1.9
4	5.8	1.7
b	5.7	1.8
4	5.5	2.0
bl	4.9	2.6
WL	4.0	3.5
N Cl of National + 14th St		
WL	4.6	2.9
bl	5.3	2.2
4	5.6	1.9
b	5.8	1.7
4	5.7	1.8
bl	5.8	1.7
EL	5.9	1.6

7.52

N 1/4 of Natural & 14th

Et			4.0	3.5
bl			5.0	2.5
y			5.7	1.8
b			5.6	1.9
y			5.7	1.8
bl			5.5	2.0
Wl			5.1	2.4
	Center of			
Wl			5.1	2.4
bl		POSTED	5.8	1.7
y			5.7	1.8
b			5.4	2.1
y			4.9	2.6
bl			3.7	3.8

7.52 Natural

S 1/4 of of Natural & 14

Wl			5.0	2.5
bl			5.0	2.5
y			5.5	2.0
b			4.9	2.6
	S bl of Natural & 14th			
Wl			4.8	2.7
bl			5.5	2.0
			5.2	2.3
	S Lin of Natural			
Wl			4.2	3.3

		7.52		
	N Line of 14th on N Line of Nature			
	55.7 W of 14th " S " " "			
Sh			3,8	3.7
bh			4,8	2.7
y			4,4	3.1
b			4,4	3.1
y			4,7	2.8
bh			4,4	3.1
Nh			4,0	3.5
	50' W of N bar 14th			
Nh			3,6	3.9
bh			4,0	3.5
y			5,0	2.5
b			4,6	2.9
y			4,5	3.0
bh			5,1	2.4
Sh			4,2	3.3

		7.52		Nature
	100'	W of	14th st	
Sh			4,5	3.0
bh			5,2	2.3
y			4,8	2.7
b			4,9	2.6
y			4,6	2.9
bh			4,2	3.3
Nh			4,1	3.4
	150'	N of	14th st	
Nh			5,3	2.2
bh			4,2	3.3
y			4,8	2.7
b			5,8	1.7
y			5,1	2.4
bh			5,2	2.3
Sh			4,2	3.3
7.P	3,54	7,90	3,16	4.36

7.90

180' W of 14 ft w

SL	7.9	00
bl	7.2	0.7
y	7.0	0.9
b	7.0	0.9
y	7.2	0.7
bl	8.1	-0.2
NL	7.0	0.9

195' W of 14 ft = E 213 n South

NL	5.2	2.7
bl	5.3	2.6
y	6.0	1.9
b	6.0	1.9
y	6.0	1.9
bl	6.7	1.7
SL	6.0	1.9

7.90

E line of 13 ft st = 66' W on North

SL	6.0	1.9
bl	5.2	2.7
y	5.0	2.9
b	5.4	2.5
y	5.5	2.4
bl	5.4	2.5
NL	4.6	3.6

S line of Natural + 13 ft w

EL	6.0	1.9
bl	5.0	2.9
y	5.0	2.9
2 E track	5.2	2.7
2 W RR	5.2	2.7
y	5.4	2.5
bl	6.0	1.9
NL	6.7	1.2

		7.90		
	S bk of		national	+ 13 ct
EL			5,2	2.7
bl			4,8	3.1
y			5,0	2.9
2 E R R			5,4	2.5
2 w R R = cte,			5,2	2.7
y			6,0	1.9
bl			6,0	1.9
WL			6,2	1.7
	S 1/4 of	National	+	13 ct
EL			5,0	2.9
bl			5,2	2.7
bl			5,2	2.7
2' E R			5,2	2.7
2' w R = cte			5,2	2.7
y			5,7	2.2
bl			6,0	1.9
WL			6,5	1.4

		7.90		National
	Center of	National	+	13 ct
EL			5,3	2.6
bl			5,0	2.9
y			5,2	2.7
2' E R			5,2	2.7
2 w R			5,4	2.5
y			6,0	1.9
bl			6,3	1.6
WL			6,2	1.7
	N 1/4 of	national	+	13 ct
EL			5,4	2.5
bl			5,4	2.5
y			5,2	2.7
2' E R			5,1	2.8
2' w R	= 1/4		5,4	2.5
bl			5,8	2.1
WL			5,6	2.3
73' n of S dine =	S dine of Mst		4,8	3.1

7.90

	N bl of	Natural & 13th	
EL		5,4	2,5
bl		5,1	2.8
"		5,1	2.8
2'ER = Ctr		5,0	2.9
2'WR = 1/4		5,2	2.7
SL of M St		5.5	2.4
	N Line of Natural & 13th		
EL		4,6	3.3
bl		5,0	2.9
"		5,0	2.9
2'ER = Ctr (SL M St)		5,0	2.9

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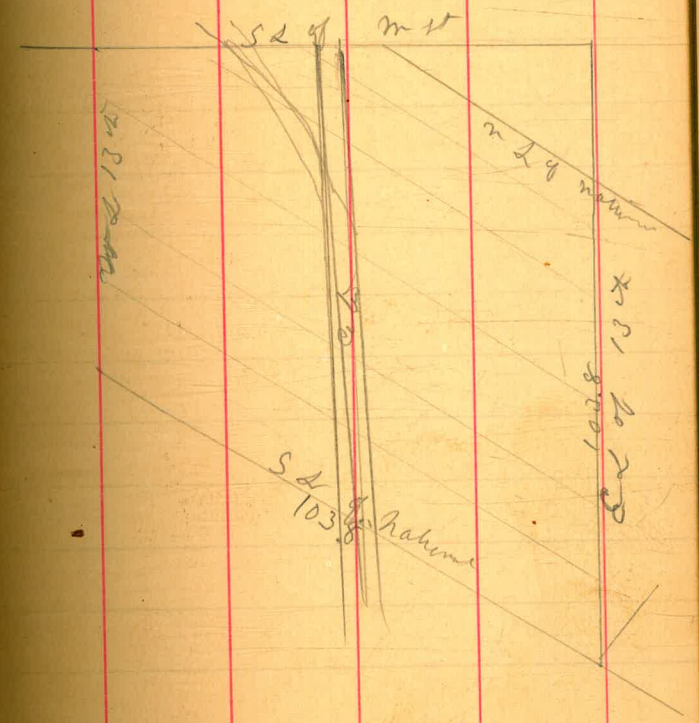


771.6
289.7
1061.3

150.79 - N.E. 26TH & "I" ON PLUG

132.92 - S.W. 26TH & "J" SPIKE IN NEW PHONE Pa

82.13 N.E. 28TH & "K" ON PLUG

97.45 S.W. 28TH & "I" ON 1"X2" PLUG

109.08 S.E. 28TH & "H" ON PLUG

120.58 N.E. (HOITT 29TH) & "J" ON PLUG

93.95 S.E. (HOITT 29TH) & "I" ON PLUG

148.41 S.E. (HOITT 29TH) & "H" ON PLUG

71.66 S.W. 26TH & "L" SPIKE IN TEL. POLE

63.84 S.W. 25TH & 'M' SPIKE IN ELEC. POLE.

74.27 - N.E. REED'S 29TH & "M" NAIL IN PHONE POLE.

66.43 - S.W. 27TH & 'M' - SPIKE IN ELEC. POLE.

80.46 - S.W. REED'S 29TH & "K" ON PLUG.

122.69 - N.W. REED'S 29TH & "J" ON PLUG.

113.12 - S.W. REED'S 29TH & 'I' ON PLUG.

109.05 - S.E. REED'S 29TH & "H" ON PLUG

138.44 - S.E. (DODSON SHORT 31ST) & "H" ON PLUG

137.56 - N.E. (DODSON SHORT 31ST) & "I" ON PLUG

82.37 - S.E. (DODSON SHORT 31ST) & "J" SPIKE IN FENCE COR

71.33 - N.W. (OLD) 29TH & "M" - SPIKE IN ELEC. POLE

69.26 - N.E EVANS & "M" - SPIKE IN ELEC. POLE

66.21 N.W. 27TH & "M" - SPIKE IN ELEC. POLE.

77.79 S.E. 27TH & "L" - SOUTH NOZZLE FIRE HYDRANT.

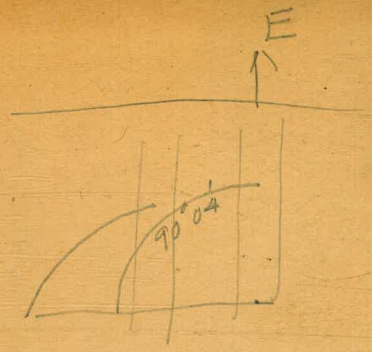
100.96 S.E. 27TH & "K" - SPIKE IN FENCE COR.

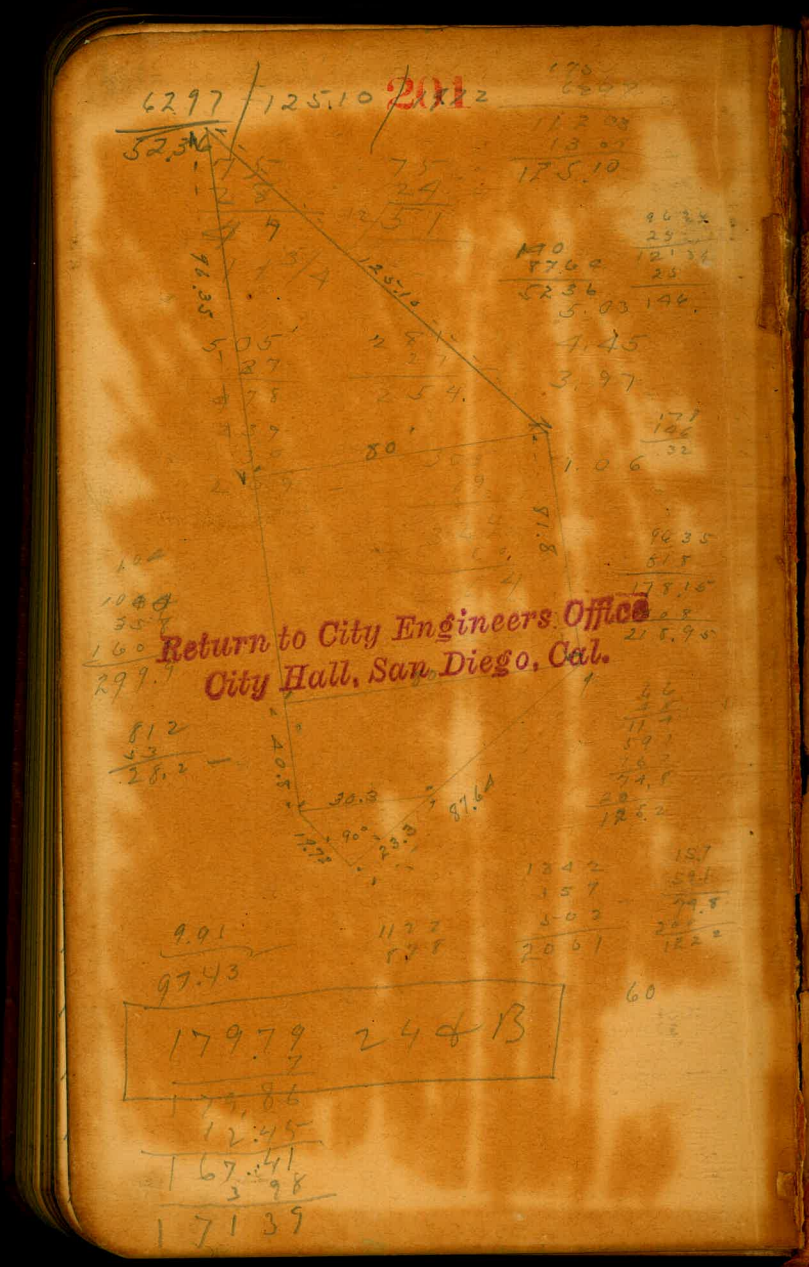
142.55 S.W. 27TH & "J" - SPIKE IN NEW PHONE POLE

153.87 S.W. 27TH & "I" PLUG.

108.60 S.E. 27TH & "H" PLUG.

162.03 S.E. 26TH & "H" PLUG





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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