F.B.384

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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

FROM
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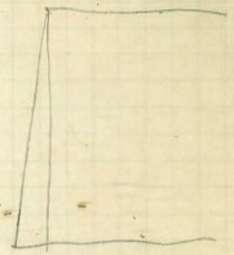

x-section Olive st from 30th st for 400' E				4/18/10	Dunkle
" " 60' wide 5' 1/4"					Sharn
B.M. con Mon. brass plg N.E. end sw'lz bridge				280.75	Evans 1
B.M.	11.14	291.89			
E.L. 30th st.					
S			11.3	280.6	
crb			11.1	280.8	
1/4			10.6	281.3	
M			10.7	281.2	
1/4			10.5	281.4	
crb			10.3	281.6	
N			9.8	282.1	
T.P.	7.42	299.08	0.23	291.66	
0+06 on N & 0+09 on S - E of 30th					
N			1.6	297.5	
crb			2.4	296.7	
1/4			2.9	296.2	
M			4.4	294.7	
1/4			5.3	293.8	
crb			5.2	293.9	
S			6.0	293.1	

299.08

0+25E of 30th St

S		5.7	293.4
Crb		3.2	295.9
"/4		3.8	295.3
M		2.1	297.0
"/4		0.9	298.2
Crb		2.0	297.1
N		2.1	297.0
	0+50		
N		2.4	296.7
Crb		3.8	295.3
"/4		4.5	294.6
M		5.8	293.3
"/4		6.8	292.3
Crb		7.1	292.0
S		7.3	291.8

299.08

0+75

S		6.6	292.5
Crb		6.0	293.1
"/4		6.3	292.8
M		5.6	293.5
"/4		4.6	294.5
Crb		4.1	295.0
N		2.8	296.3
	1+0		
N		3.0	296.1
Crb		5.0	294.1
"/4		5.6	293.5
M		5.3	293.8
"/4		6.4	292.9
Crb		6.6	292.5
S		7.1	292.0

2

	299.08		
	1+25		
S		7.3	291.8
Crk		6.8	292.3
"/4		6.5	292.6
M		5.6	293.5
"/4		5.4	293.7
Crk		4.5	294.6
N		3.2	295.9
	1+50		
N		3.2	295.9
Crk		4.2	294.9
"/4		5.0	294.1
M		5.7	293.4
"/4		6.7	292.4
Crk		7.9	291.2
S		7.9	291.2

	299.08		
	1+75		
S		8.3	290.8
Crk		7.4	291.7
"/4		6.9	292.2
M		5.8	293.3
"/4		4.9	294.2
Crk		4.9	294.7
N		3.3	295.8
	2+0		
N		3.8	295.3
+4		4.1	295.0
45		4.5	294.6
Crk		48	294.3
"/4		5.5	293.6
M		6.0	293.1
"/4		7.5	291.6
Crk		7.9	291.2
S		8.7	290.4

	299.05		
	2+75		
S		12.8	286.3
crk		11.3	287.8
"/4		9.5-	289.6
M		6.7	292.4
"/4		5.7	293.4
crk		5.6	293.5
+4		5.2	293.9
+5		4.5	294.6
N		4.2	294.9
	2+50		
N		4.3	294.8
+5		4.8	294.3
+6		5.3	293.8
crk		5.7	293.4
"/4		6.0	293.1
M		7.1	292.0
"/4		8.2	290.9
crk		10.4	288.7
S		14.6	284.5

	299.05		
	2+75		
S		9.7	289.4
crk		9.3	289.8
"/4		8.5-	290.6
M		7.2	291.9
"/4		6.1	293.0
crk		5.9	293.2
+4		5.5-	293.6
+5		5.0	
N		4.6	294.5
	3+0		
N		4.9	294.2
+5		5.4	293.7
+6		6.0	293.1
crk		6.2	292.9
"/4		6.5	292.6
M		7.7	291.4
"/4		9.1	290.0
crk		9.5	289.6
S		10.1	289.0

	249.08		
	3+25		
S		11.0	278.1
Crk		10.0	289.1
1/4		9.6	289.5
M		7.8	291.3
1/4		6.5	292.6
Crk		6.3	292.8
+3		6.2	292.9
+4		5.6	293.5
N		5.2	293.9
	2+50		
N		5.7	293.4
Crk		6.9	292.2
1/4		7.2	291.9
M		9.1	290.0
1/4		11.0	288.1
Crk		11.9	287.2
S		12.3	286.8

	249.08		
	3+75		
S		23.5	275.6
Crk		17.8	281.3
1/4		13.7	285.4
M		11.7	287.4
1/4		10.1	289.0
Crk		9.6	289.5
N		6.7	292.4
	At o E of 30th St		
N		9.5	289.6
Crk		12.3	286.8
1/4		13.1	286.0
M		15.9	283.2
+6		17.6	281.5
1/4		25.9	273.2
Crk		30.2	268.9
S		34.8	264.3

X-section Palm St 30th to 31st St
" 60 wide 5 1/4's

4/18/10 Dunkle
Shane
Evans.

B.M. Con.-Mon N.E. end Switzer bridge 280.75

B.M.	11.14	291.89			
T.P.	7.42	299.08	0.23	291.66	
T.P.	12.72	310.75	1.05	298.03	

E.L. 30th St.

S	9.6	301.2
crb	9.3	301.5
1/4	9.7	301.1
M	8.6	302.2
1/4	8.6	302.2
crb	8.0	302.8
N	7.6	303.2

0+25 E

N	6.5	304.3
	7.2	303.6
crb	7.0	303.8
+1		
1/4	7.7	303.1
M	7.4	303.4
1/4	8.6	302.2
+4	8.6	302.2
crb	7.9	302.9
S	8.4	302.4

310.75

0+50

S	7.1	303.7
crb	7.2	303.6
+	7.7	303.1
1/4	7.4	303.4
M	6.5	304.3
1/4	6.9	303.9
+4	7.1	303.7
crb	6.3	304.5
N	6.2	304.6

0+75

N	5.1	305.7
crb	5.4	305.4
+1	6.1	304.7
1/4	6.0	304.8
M	5.5	305.3
1/4	6.8	304.0
+4	6.7	304.1
crb	6.3	304.5
S	6.1	304.7

310.75

1+00

S	5.0	305.8
crb	5.3	305.5
+1	5.8	305.0
⅓	5.6	305.2
M	4.6	306.2
⅓	5.0	305.8
+4	5.1	305.7
crb	4.5	306.3
N	4.4	306.4

1+25

N	3.2	307.6
+2	3.7	307.1
crb	3.7	307.1
+1	4.4	306.4
⅓	4.5	306.3
M	4.1	306.7
⅓	4.7	306.1
crb	4.7	306.1
S	4.2	306.6

310.75

1+50

S	4.3	306.5
crb	4.4	306.4
⅓	4.5	306.3
M	3.9	306.9
⅓	4.3	306.5
+3	3.9	306.9
crb	3.8	307.0
N	3.4	307.4

1+75

N	3.8	307.0
+8	3.9	306.9
crb	4.3	306.5
⅓	4.1	306.7
M	3.8	307.0
⅓	4.6	306.2
crb	4.6	306.2
S	4.9	306.4

310.75

2+00

S	4.7	306.1
Crk	4.9	305.9
1/4	4.6	306.2
M	4.1	306.7
1/4	4.4	306.4
Crk	4.6	306.2
N	4.0	306.8

2+25

N	4.4	306.4
Crk	4.5	306.3
1/4	4.6	306.2
M	4.5	306.3
1/4	4.8	306.0
Crk	4.5	306.3
S	4.6	306.2

310.75

2+50

S	5.2	305.6
Crk	5.1	305.7
1/4	5.1	305.7
M	4.7	306.1
1/4	4.4	306.4
Crk	4.5	306.3
N	4.2	306.6

2+75

N	4.0	306.8
Crk	4.7	306.1
1/4	4.5	306.3
M	4.7	306.1
1/4	5.2	305.6
Crk	5.1	305.7
S	5.3	305.5

	310.75		
	3+0		
S		5.7	305.1
Crk		5.6	305.2
1/4		5.6	305.2
M		5.0	305.8
1/4		5.1	305.7
Crk		5.2	305.6
N		4.8	306.0
	3+25		
N		5.8	305.0
Crk		6.1	304.7
1/4		6.0	304.8
M		6.3	304.5
1/4		6.7	304.1
Crk		6.5	304.3
S		6.7	304.1

		3+50		
S			8.7	302.1
Crk			8.8	302.0
1/4			8.6	302.2
M			8.0	302.8
1/4			7.7	303.1
Crk			7.9	302.9
N			7.4	303.4
		3+75		
N			9.8	301.0
Crk			10.1	300.7
1/4			10.0	300.8
M			10.0	300.8
1/4			10.8	300.0
Crk			11.0	299.8
S			10.8	300.0
T.P.	2.84	300.98	12.61	298.14

300.98

4+0

S	3.2	297.8
Crk	3.5	297.5
1/4	3.3	297.7
M	2.4	298.6
1/4	2.5	298.5
Crk	2.7	298.3
N	2.3	298.7

4+25

N	4.4	296.6
Crk	4.9	296.1
1/4	4.8	296.2
M	5.0	296.0
1/4	5.5	295.5
Crk	5.7	295.3
S	5.6	295.4

4+50

S	8.0	293.0
Crk	8.2	292.8
1/4	8.0	293.0
M	7.4	293.6
1/4	7.6	293.4
Crk	7.9	293.1
N	7.5	293.5

4+75

N	9.8	291.2
Crk	10.2	290.8
1/4	10.0	291.0
M	9.8	291.2
1/4	10.3	290.7
Crk	10.6	290.4
S	10.6	290.4

		300.98		
		5+00		
S			13.2	287.8
Crk			13.1	287.9
"/4			12.8	288.2
M			12.4	288.6
"/4			12.5	288.5
Crk			12.1	288.9
N			11.9	289.1
T.P.	1.70	289.75	12.93	288.05
		5+25		
N			3.1	286.7
Crk			3.3	286.5
"/4			3.8	286.0
M			3.5	286.0
"/4			4.6	285.2
Crk			4.7	285.1
S			4.7	285.1

		289.75		
		5+50		
S			7.5	282.3
Crk			7.0	282.8
"/4			6.6	283.2
M			6.3	283.5
"/4			5.7	284.1
Crk			5.6	284.2
N			5.6	284.2
		5+75		
N			8.6	281.2
Crk			8.5	284.3
"/4			8.6	284.2
M			9.0	280.8
"/4			9.4	280.4
Crk			9.7	280.1
S			10.2	279.6

		289.75		
		5+83		
S			11.5	278.3
crb			11.1	278.7
1/4			10.8	279.0
M			10.5	279.3
1/4			10.0	279.8
crb			10.3	279.5
N			12.0	277.8
		6+0 = W.L. 31st S		
N			22.6	267.2
crb			20.7	269.1
1/4			19.8	270.0
M			18.2	271.6
1/4			15.7	274.1
crb			14.5	275.3
S			14.5	275.3

x-section Quince st 30th to 31st
" " 60' wide 5' gutters, w/ Dunkle / Thune / Evans

B.M.	Cor. Mon 30th	N. end switch bridge		280.75	
B.M.	12.57	293.32			
T.P.	12.30	305.12	0.50	292.82	
T.P.	11.21	314.45	1.88	303.24	
		E.L. 30th			
S			3.5	311.0	
crb			3.5	311.0	
1/4			3.5	311.0	
M			3.5	311.0	
1/4			3.5	311.0	
crb			3.5	311.0	
N			3.3	311.2	
	0+25 E				
N			3.4	311.1	
crb			3.8	310.7	
1/4			3.7	310.8	
M			3.8	310.7	
1/4			3.9	310.6	
crb			4.0	310.5	
S			4.0	310.5	

		314.45		
		0+50		
S			3.7	310.8
crb			4.1	310.4
1/4			4.2	310.3
M			4.1	310.4
1/4			4.3	310.2
crb			4.4	310.1
N			4.0	310.5
		0+75		
N			5.0	309.5
crb			5.1	309.4
1/4			5.3	309.2
M			4.7	309.8
1/4			5.2	309.3
crb			5.4	309.1
S			5.3	309.2

	314.45		
	1+00		
S	5.7	308.8	
Crk	5.9	308.6	
⅛	5.8	308.7	
M	5.2	309.3	
⅛	5.9	308.6	
Crk	5.7	308.8	
N	5.6	308.9	
	1+25		
N	6.5	308.0	
Crk	6.3	308.2	
⅛	5.9	308.8	
M	5.3	309.2	
⅛	6.2	308.3	
Crk	6.4	308.1	
S	6.2	308.3	

	314.45		
	1+50		
S	6.6	307.9	
Crk	7.0	307.5	
⅛	6.5	308.0	
M	6.5	308.0	
⅛	6.6	307.9	
Crk	6.6	307.9	
N	6.4	308.1	
	1+75		
N	6.9	307.6	
Crk	6.5	308.0	
⅛	6.4	308.1	
M	6.1	308.4	
⅛	6.5	308.0	
Crk	6.4	308.1	
S	6.3	308.2	

	314.45		
	2+00		
S		6.7	307.8
Crk		7.0	307.5
1/4		6.8	307.7
M		7.0	307.5
1/4		7.1	307.4
Crk		7.2	307.3
N		7.3	307.2
	2+25		
N		8.4	306.1
Crk		7.8	306.7
1/4		7.4	307.1
M		6.8	307.7
1/4		6.6	307.9
Crk		6.7	307.8
S		6.4	308.1

	314.45		
	2+50		
S		6.7	307.8
Crk		6.9	307.6
1/4		6.9	307.6
M		7.6	306.9
1/4		8.6	305.9
Crk		8.9	305.6
N		10.3	304.2
	2+75		
N		19.0	295.5
Crk		14.4	300.1
1/4		13.0	301.5
M		9.2	305.3
1/4		8.0	306.5
Crk		7.8	306.7
S		7.6	306.9

		314.45		
		3+0		
S			8.7	305.8
crk			9.7	304.8
"A			10.4	304.1
M			13.0	301.5
T.P.	0.70	302.30	12.85	301.60
"A			6.1	296.2
crk			8.1	294.2
N			15.3	287.0
		3+25		
N			23.0	279.3
crk			16.2	286.1
"A			13.5	288.8
M			8.6	293.8
"A			3.3	
crk			2.1	
S			0.7	301.6

		302.30		
		3+50		
S			9.6	292.7
T.P.	0.44	290.34	12.40	289.90
crk			1.4	
"A			2.7	
M			6.7	283.6
"A			12.4	277.9
crk			14.3	276.0
N			18.3	272.0
		3+75		
N			26.6	263.7
crk			24.7	265.6
"A			23.8	
M			21.1	269.2
"A			14.8	
crk			13.5	
S			10.1	280.2
T.P.	0.71	278.04	13.01	277.33

		278.04		
		470		
S			7.7	270.3
Crk			11.5	
1/4			13.8	
M			20.2	257.8
1/4			21.0	
Crk			21.9	
N			22.2	255.8
		4725		
N			23.3	254.7
Crk			23.9	
1/4			23.4	
M			23.9	254.1
1/4			22.9	
Crk			20.1	
S			14.4	263.6
T. P.	0.72	265.97	12.79	265.25

		265.97		
		4750		
S			8.5	257.5
Crk			13.5	
1/4			15.6	
M			12.9	253.1
1/4			12.7	
Crk			10.3	
N			9.0	257.0
		4775		
N			5.2	260.8
Crk			9.1	
1/4			10.6	
M			13.7	252.3
1/4			14.6	
Crk			15.0	
S			14.4	251.6

		265.97		
		5+0		
S			15.5	250.5
Crb			15.5	
½			14.8	
M			12.4	253.6
½			5.4	
Crb			2.5	
T.P.	11.86	277.48	0.35	265.62
N			9.5	268.0
		5+25		
N			1.0	276.5
Crb			5.5	
½			7.5	
M			14.7	262.8
½			22.3	
Crb			23.7	
S			26.6	250.9

		277.46		
		5+50		
S			18.9	258.6
Crb			15.6	
½			13.5	
M			8.0	269.5
T.P.	12.41	289.29	0.60	276.88
½			11.7	
Crb			9.5	
N			4.3	285.0
T.P.	-5.04	293.37	0.94	288.33
		5+75		
N			4.4	289.0
Crb			6.8	
½			8.5	
M			14.3	279.1
½			21.3	
Crb			23.0	
S			26.1	267.3

293.37

6+0 = W.L. 31st St

S		15.6	277.8
Crb		11.9	
1/4		9.0	
M		6.0	287.4
1/4		3.8	
Crb		3.1	
N		1.9	291.5

1-section Front st Walnut to UPas					4/27/10	Dunkle Shaw Evans			253.32		
" " 80' wide 5 1/4"											
B.M. brass plg 1st & Walnut				250.90					0+15		
B.M.	2.42	253.32					W			5.7	247.6
							+7			4.6	
	S.L. Walnut						crb			8.9	
							1/4			9.2	
W			3.6	249.7			M			8.7	244.6
crb			3.3				1/4			6.9	
1/4			3.2				crb			6.9	
							T.P.	3.77	346.51	10.58	242.74
M			3.5	249.8			E			+0.8	347.3
1/4			4.0						0+25		
crb			3.5				E			1.1	245.4
E			2.9	250.4			crb			1.4	
	0+07 S						1/4			1.5	
E			4.7	248.6			M			2.7	243.8
crb			5.4				+16			3.7	
1/4			5.0				1/4			2.4	
M			3.9	249.4			crb			2.6	
1/4			3.8				+8			0.0	
crb			3.6				W			1.4	245.1
W			3.7	249.6							

	246.51		
	0+50		
W	3.6	242.9	
+3	3.5		
+7	5.5		
crk	5.5		
1/4	5.2		
M	3.9	242.6	
1/4	3.3		
crk	2.9		
E	2.2	244.3	
	0+75		
E	2.8	243.7	
crk	3.7		
1/4	4.0		
M	5.1	241.4	
1/4	6.4		
crk	6.7		
W	6.6	239.9	

	246.51		21
	1+0		
W	7.1	239.4	
crk	7.1		
1/4	7.0		
M	5.2	241.3	
1/4	4.2		
crk	3.9		
E	3.0	243.5	
	1+25		
E	3.4	243.1	
crk	4.5		
1/4	4.6		
M	5.8	240.7	
1/4	7.2		
crk	7.5		
W	8.8	237.7	

2+16.51

1+50

W	8.4	238.1
crb	7.6	
1/4	7.3	
M	5.9	240.6
1/4	4.8	
crb	4.4	
E	3.2	243.3

1+66 = N.L. UP 85

E	3.9	242.6
crb	4.7	
1/4	5.0	
M	6.4	241.1
1/4	7.5	
Crb	7.6	
W	8.5	238.0

9 Hatch X Sec. Florence St from
6 Moore
1910 Rogers 34th to 35th

BM	9.45	151.85		6396	SE Cor 34th and National
	1062	24.27	2.20	13.65	
		EL	34th		
S			12.5	11.8	
ab			12.1	12.2	
1/4			11.4	12.9	
C			11.4	12.9	
1/4			10.7	13.6	
ab			11.7	12.6	
N			11.7	12.6	
		25' E			
N			8.2	16.1	
ab			8.3	16.0	
1/4			8.3	16.0	
C			8.2	16.1	
1/4			8.7	15.6	
ab			8.8	15.5	
S			9.4	14.9	

		24.27			
		50' E			
S			6.0	18.3	
ab			5.6	18.7	
1/4			5.4	18.9	
C			4.6	19.7	
1/4			4.7	19.6	
ab			5.1	19.2	
N			5.2	19.1	
		75' E			
N			2.8	21.5	
ab			2.4	21.9	
1/4			1.9	22.5	
C			1.7	22.6	
1/4			2.5	21.9	
ab			2.1	22.2	
S			2.2	22.1	
TP	12.28	36.32	0.23	24.04	

36,32

100' E

S	11.2	25.1
sb	12.3	25.0
sa	11.9	24.4
C	11.6	24.7
na	11.5	24.8
Nb	12.0	24.3
N	12.5	23.8

125' E

N	9.6	26.7
Nb	9.2	27.1
na	8.7	27.6
C	8.3	28.0
sa	8.4	27.9
Sb	7.1	29.2
S	6.3	30.0

36,82

150 E

S	2.1	34.2
Sb	2.9	33.4
sa	4.5	31.8
C	5.7	30.6
na	6.9	29.4
Nb	7.3	29.0
N	7.9	28.4

175 E

N	6.0	30.3
Nb	6.0	30.3
na	5.1	31.2
C	4.2	32.1
sa	3.1	33.2
Sb	1.7	34.6
S	1.3	35.0

36.32

200' E

S	1.7	34.6
S	1.9	34.4
1/4	3.3	33.0
C	3.5	32.8
1/4	4.1	32.2
S	4.6	31.7
N	4.8	31.5

225' E

N	3.9	32.4
S	3.7	32.6
1/4	3.3	33.0
C	3.1	33.2
1/4	3.0	33.3
S	2.1	34.2
S	1.6	34.7

36.32

250' E

S	1.1	35.2
S	1.2	35.1
1/4	2.0	34.3
C	2.1	34.2
1/4	2.2	34.1
S	2.5	33.8
N	2.6	33.7

270' E

N	0.9	35.4
S	0.8	35.5
1/4	0.5	35.8
C	0.4	35.9
1/4	0.3	36.0
S	+0.4	36.7
S	+0.5	36.8
TP	1302 49.04	030 36.02

A904

300 E

S	10.3	38.7
ab	10.5	38.5
1/4	11.4	37.6
c	11.5	37.5
1/4	11.6	37.4
d	11.9	37.1
N	12.1	36.9

325 E

N	10.7	38.3
ab	10.5	38.5
1/4	10.0	39.0
c	10.0	39.0
1/2	10.0	39.0
cd	8.9	40.1
S	8.7	40.3

A904

350 E

S	7.1	41.9
ab	7.2	41.8
1/4	8.0	41.0
c	8.4	40.6
1/4	8.5	40.5
cd	8.9	40.1
N	9.1	39.9

375 E

N	7.9	41.1
ab	7.7	41.3
1/4	7.4	41.6
c	7.1	41.9
1/4	6.9	42.1
cd	5.9	43.1
S	5.6	43.4

	49.04		
	400' E		
S		4.4	44.6
A		4.7	44.3
1/a		3.6	43.4
E		5.7	43.3
1/4		6.1	42.9
Ch.		6.6	42.4
N		6.6	42.4
	425' E		
N		5.4	43.6
Ch.		6.3	43.7
b		4.7	44.3
C		4.5	44.5
1/4		4.1	44.9
Ch.		3.5	45.5
S		3.1	45.9

		49.04		
		450 E		
S			1.5	47.5
A			1.9	47.1
1/a			2.7	46.3
C			3.1	45.9
1/a			3.8	45.2
A			4.2	44.8
N.			4.3	44.7
		475 E		
N.			2.8	46.2
A			2.6	46.4
b			1.8	47.2
C			1.4	47.6
1/a			1.1	47.9
A			0.4	48.6
S			0.1	48.9
T.P	7.21	56.11	0.14	48.90

56.11

500 E

S	5.2	50.9
ab	5.6	50.5
1/4	5.3	50.8
C	6.5	49.6
1/4	7.2	48.9
ab	8.0	48.1
N	8.4	47.7

525 E

N	7.2	48.9
ab	5.7	50.4
1/4	6.0	50.1
C	4.4	51.7
1/4	4.0	52.1
ab	4.2	51.9
S	4.1	52.0

56.11

550 E

S	8.0	59.1
ab	2.9	53.2
1/4	3.8	52.3
C	4.2	51.9
1/4	5.0	51.1
ab	5.8	50.3
N	6.0	50.1

575 E

N	5.6	50.5
ab	5.2	50.9
1/4	4.6	51.5
C	4.1	52.0
1/4	3.6	52.5
ab	3.2	52.9
S	2.5	53.6

56.11

600' E = Wh. 35th

S	2.36	53.75	Hub.
cb	2.9	53.12	
1/4	3.2	52.9	
c	3.5	52.6	
1/4	3.9	52.2	
cb	4.9	51.2	
N	4.9	51.2	

9/6 Hatch X Sec Alley between Cleaveland
Moore and Maryland, Meade and
10 Rogers Monroe.

BM	3.35	351.08		347.73	Sw Cor Cleaveland and Monroe
		Sl. Monroe			
E			4.1		
Cr			4.4		
W			5.2		
		25' S			
W			5.1		
Cr			4.2		
E			4.2		
		50' S			
E			4.3		
Cr			4.4		
W			4.8		
		75			
W			5.2		
Cr			4.7		
E			4.4		

		351.08			
		100' S			
E			5.1		
Cr			5.2		
W			5.2		
		125' S			
W			5.4		
Cr			5.3		
E			5.4		
		150' S			
E			4.4		
Cr			5.0		
W			5.3		
		175' S			
W			6.2		
Cr			6.1		
E			6.1		

351.08

200'S

E 4.3
Cr 6.1
W 5.9

225'S

W 5.3
Cr 5.9
E 6.1

250'S

E 4.9
Cr 5.2
W 5.4

275'S

W 5.6
Cr 6.0
E 6.1

357.08

300'S

E 5.6
Cr 5.9
W 5.9

TP 5.21 350.74 5.55 345.53

325'S

W 5.4
Cr 5.2
+S 4.8
E 4.7 / 3.2

350'S

E 5.1
Cr 5.8
W 5.7

375'S

W 5.6
Cr 5.2
E 4.9

3507.74

400'S

E 5.1

CR 4.6

W 4.4

455'S

W 5.8

CR 5.5

E 5.6

450'S

E 5.7

CR 5.8

W 5.9

475'S

W 5.4

CR 4.6

E 4.6

32

3507.74

500'S

F 6.1

CR 5.9

W 6.1

525'S

W 6.0

CR 6.2

E 4.8

550'S

E 5.9

CR 5.7

W 6.0

575'S

W 6.5

CR 6.8

E 6.6

	350.74	
	596 's.	
E		7.0
Cl		6.5
W		6.8
	600 = Nt Meade	
W		8.8
Cl		9.0
E		9.6

Levels on Grand Ave (Pac Beach) between 1/3 Pendleton & intersection of S.L. Garnet on N.L. & between 1/3 " W.L. of Pac Beach Add on S.L. Levels taken on curb Line as graded distances taken on Property L.

Dunkle
Thaw
Tichenor

B.M. spk in pole 0.99	34.54	33.55

S. Curb Line Grand Ave

E.L. Pendleton	6.1	28.4
0+25 - E	6.4	28.1
0+50	6.5	28.0
0+75	6.8	27.7
1+0	7.2	27.3
1+25	7.4	27.1
1+50	7.7	26.8
1+75	8.0	26.5
2+0	8.2	26.3
2+25	8.5	26.0
2+50	8.8	25.7
2+75	9.0	25.5
3+0 = end of curb as graded	9.4	25.1
3+18 = E.L. Pac Beach Add. Prop. L.	9.7	24.8

N. Curb Line Grand Ave

E.L. Pendleton	5.2	29.3
0+25 E	5.7	28.8
0+50	6.2	28.3
0+75	6.6	27.9
1+0	6.9	27.6
1+25	7.4	27.1
1+50	7.7	26.8
1+85 = Intsection S.L. Garnet.	7.8	26.7

2/9/12 Clough Donnan Fitz

X Sec of 29th St (80')
N L of S Park to S L ~~N Park~~ Date St
(20'' walks)

	1088	22387		212.99	Bm NW Bean & Cedar
	119.5 S of Date St = N L S Park				
W			5.9	218.0	
bh			6.1	217.8	
	Gutter		6.7	217.2	
y			6.5	217.4	
b			6.1	217.8	
y			6.5	217.4	
	Gutter		6.8	217.1	
bh			6.2	217.7	
E			6.0	217.9	
	116' of Date St				
W			3.2	220.7	

		22387		
	100	S of	Date St	
E			1.3	222.6
bh			2.8	221.1
y			3.4	220.5
b			4.0	219.9
y			3.5	220.4
bh			3.3	220.6
W			2.8	221.1
	75'	S of	Date St	
W			2.9	221.0
bh			2.8	221.1
y			2.4	221.5
b			2.6	221.3
y			2.7	221.2
bh			2.6	221.3
+15			2.0	221.9
E			1.3	222.6

		223.87						223.87			29 ft
	50'	S of	Date	st			S Sin	of	Date St	(60)	
E			1,8	222,1		E			0,9	223,0	
bh			2,8	221,1		bh			1,9	222,0	
y			3,0	220,9		y			2,3	221,6	
b			2,7	221,2		b			2,9	221,0	
y			3,0	220,9		y			3,4	221,5	
bh			3,4	220,5		bh			3,8	220,1	
w			3,4	220,5		w			4,3	219,6	
						TP	10,18	231,75	2,30	221,57	
	25'	S of	Date	st			N Sin	of	Date St	(60)	
w			4,6	219,3		w			[illegible]		
bh			3,7	220,2		bh			[illegible]		
y			3,1	220,8				223.87 2.30 221.57 10.18 231.75	9,1		
b			2,9	221,0		b			[illegible]		
y			2,7	221,2		y			[illegible]		
bh			2,3	221,6		bh			[illegible]		
E			1,2	222,7		E			6,3		

231.75

X Sec 29th St (60' wid)

N Sin of Date to S S of N Park

N S of Date S S

W			9.8	222.0
bh			9.9	221.9
y			9.1	222.7
b			8.8	223.0
y			7.6	224.2
bh			7.1	224.7
E			6.3	225.5
E				

25' N of Date St

E			5.3	226.5
bh			6.3	225.5
y			7.1	224.7
b			7.6	224.2
y			8.0	223.8
bh			9.0	222.8
W			9.1	222.7

231.75

29th

50' N of Date St

W			8.8	223.0
bh			7.9	223.9
y			7.3	224.5
b			6.3	225.5
y			5.7	226.1
bh			5.5	226.3
E			4.9	226.9

75' N of Date St

E			3.6	228.2
bh			4.3	227.5
y			5.4	226.4
b			6.0	225.8
y			6.9	224.9
bh			7.7	224.1
W			8.3	223.5

231.75

	100	n f	Date	st
W			7.0	224.8
bb			6.6	225.2
y			6.0	225.8
b			5.3	226.3
y			4.7	227.1
bb			4.0	227.8
E			3.2	228.6

	125'	n f	Dat	st
E			1.5	229.3
bb			3.1	228.7
y			3.9	227.9
b			4.9	226.9
y			5.0	226.8
bb			5.5	226.3
W			6.4	225.4

231.75

	150'	n f	Date	st
W			5.8	226.0
bb			5.0	226.8
y			4.3	227.5
b			4.0	227.8
y			3.8	228.0
bb			3.0	228.8
E			2.1	229.7

	175'	n f	Dat	st
E			2.1	229.7
bb			3.0	228.8
y			3.4	228.4
b			3.6	228.2
y			4.1	227.7
bb			4.6	227.2
W			5.2	226.6

		231,75		
	200	n f	Dote	st
w			4,5	227,3
bb			4,0	227,8
y			3,7	228,1
b			3,0	228,8
y			2,7	229,1
bb			2,3	229,5
E			1,9	229,9
	225	n f	Dote	st
E			1,4	230,4
bb			2,0	229,8
y			2,3	229,5
b			2,8	229,0
y			3,2	229,6
bb			3,4	228,4
w			3,8	228,0

		231,75			29 st
	250	n f	Dote	st	
w			2,5	229,3	
bb			2,4	229,4	
y			2,2	229,6	
bb			1,9	229,9	
y			1,6	230,2	
bb			1,0	230,8	
E			0,8	231,0	
	275	n f	Dote	st	
E			0,0	231,8	
bb			0,3	231,5	
TP	3,49	235,03	0,21	231,54	
y			3,9	231,1	
b			4,1	230,9	
y			4,4	230,6	
bb			4,5	230,5	
w			4,9	230,1	

		235.03			
	300'				
W			4.8	230.2	
bh			4.5	230.5	
"			4.0	231.0	
b			3.5	231.5	
"			3.2	231.8	
bl			2.8	232.2	
E			2.2	232.8	
	320'	n of = S L	Elm	(60)'	
E			1.8	233.2	
bh			2.4	232.6	
"			2.9	232.1	
b			3.4	231.6	
"			3.8	231.2	
bl			4.1	230.9	
W			4.7	230.3	
TP	372	233.44	5.31	229.72	S W Hub

		233.44			29 Oct 20
	N Sin of	Elm St			40
W			11.6	221.8	
bh			11.8	221.6	
"			11.0	222.4	
b			9.7	223.7	
"			7.7	225.7	
bl			5.3	228.1	
E			3.3	230.1	
	7'	n of	Elm		
WL			14.0	219.4	
EL			6.0	227.4	
	Slopes are a regular V				

2334.4

	25'		Elev	
E			1.4	232.0
bb			2.0	231.4
y			2.5	230.9
b			3.0	230.4
y			3.8	229.6
bb			5.2	228.2
W			8.6	224.8
	50	n y	Elev	
W			4.3	229.1
bb			3.5	229.9
y			2.7	230.7
b			2.0	231.4
y			1.5	231.9
bb			0.6	232.8
E			0.0	233.4

2334.4

	75'	2 y	Elev	
E			0.1	233.3
bb			1.1	232.3
y			2.2	231.2
b			3.0	230.4
y			3.9	229.5
bb			4.9	228.5
W			5.8	227.6
	100'	w y	Elev	
W			7.3	226.1
bb			6.7	226.7
y			5.8	227.6
b			4.8	228.6
y			3.6	229.8
bb			2.3	231.1
E			1.4	232.0
TP	1.33	233.65	1.1V	232.3V

233.65

	175	n of	Elm St	
E			3.1	230.6
bk			4.5	229.2
y			5.8	227.9
b			6.8	226.9
y			8.0	225.7
bk			9.2	223.5
W			10.3	223.4
	150	n of	Elm St	
W			13.0	220.7
bk			11.5	222.2
y			10.2	223.5
b			9.0	224.7
y			7.5	225.2
bk			6.5	226.2
E			3.2	228.5

233.63

	175	n of	Elm St	
E			7.5	226.2
bk			8.9	224.8
y			10.5	223.2
b			11.9	221.8
y			13.2	220.5
bk			15.5	218.2
		224.34		
W			10.0	214.3
TP	335	224.24	12.6	209.8 Rock
	200	n of	Elm St	
W			16.5	207.7
bk			14.0	210.2
y			10.4	213.8
b			6.2	218.0
y			4.5	219.7
bk			3.0	221.2
E			1.2	223.0

		224.24			
	225'	n f	Elm st		
E			8.8	215.4	
bb			11.3	212.9	
y			13.2	211.0	
b			14.8	209.4	
y			13.0	211.2	
bb			10.3	213.9	
W			7.9	216.3	
	238'	n f	Elm	(Patent)	
E L			12.5	211.7	
bb			13.0	211.2	
					TP
	12.59	233.48		220.89	

		233.48			29 ct
	250'	n f	Elm		
W			10.4	223.1	
bb			10.3	223.2	
y			10.8	222.7	
b			11.4	222.1	
y			13.3	220.2	
bb			15.1	218.4	
E			16.8	216.7	
	275'	n f	Elm st		
E			6.6	226.9	
bb			5.9	227.6	
y			5.9	227.6	
b			6.2	227.3	
y			6.6	226.9	
bb			6.8	226.7	
W			7.0	226.5	
TP	12.88	241.99	4.37	229.11	

24.99

30' n of Elm st

W	12.3	229.7
bl	12.3	229.7
y	12.0	230.0
b	11.5	230.5
y	11.3	230.7
bl	11.0	231.0
E	10.6	231.4

320 n of S Lf 7th st (60)

E	8.3	233.7
bl	8.8	233.2
y	9.2	232.8
b	9.6	232.4
y	9.9	232.1
bl	10.0	232.0
W	9.9	232.1

TP 12.91 250.11 47.9 237.20

250.11

25' n of 7th st

W	12.4	237.7
bl	12.2	237.9
y	12.2	237.9
b	11.9	238.2
y	11.7	238.4
bl	11.3	238.8
E	11.0	239.1

25' n of 7th st

E	8.7	241.4
bl	9.1	241.0
y	9.3	240.8
b	9.7	240.2
y	10.3	239.8
bl	10.9	239.2
W	11.5	239.6

25011

	50'	n f	Z in	st
W			10,8	239.3
bh			9,9	240,2
y			8,9	241,2
b			8,0	242.1
y			7,1	243.0
bh			6,8	243.3
E			6,4	243.7
	75'	n f	Z in	st
E			4,0	246.1
bh			5,0	245.1
y			5,8	244.3
b			6,6	243.5
y			7,7	242.4
bh			8,8	241.3
W			9,9	240.2

25011

	100'	n f	Z in	st
W			8,9	241,2
bh			7,8	242.3
TP	11,05	25586	5,30	24481
y			11,9	244.0
b			10,1	245.8
y			9,0	246.9
bh			8,0	247.9
E			7,2	248.7
	125'	n f	Z in	
E			5,7	250,2
bh			6,3	249.6
y			7,2	248.7
b			8,2	247.7
y			9,2	246.7
bh			10,5	245.4
W			12,6	243.3

255.86

	150'	n f	Fir	st
w			9,6	246.3
bh			8,7	247.2
y			7,7	248.2
b			6,6	249.3
y			5,9	250,0
bh			5,1	250,8
E			4,5	251,4
	175'	n f	Fir	st
E			3,4	252.5
bh			4,0	251,9
y			4,6	251.3
b			5,5	250.4
y			6,1	249.8
bh			7,1	248.8
w			8,2	247,7

255.86

2902

	200'	n f	Fir	st
w			7,2	248.7
bh			6,2	249.7
y			5,2	250,7
b			4,5	251.4
y			3,9	252.0
bh			3,1	252.8
E			2,4	253.5
	225'	n f	Fir	
E			1,6	254.3
bh			2,3	253.6
y			2,9	253,0
b			3,8	252,1
y			4,6	251.3
bh			5,4	250.5
w			6,5	249.3

25-86

250 n of 7in st

W	6,8	249.1
bk	5,9	250.0
y	5-0	250.9
b	3,8	252.1
y	3,0	252.9
bk	2,1	253.8
E	1,4	254.5

275 n of 7in st

E	1,2	254.7
bk	2,0	253.9
y	2,9	253.0
b	4,1	251.8
y	5-5	250.4
bk	6,6	249.3
W	8,1	247.8

287 n of 7in

W	9,8	246.1

25-86

300 n of 7in st

W	8,4	247.5
bk	8,6	247.3
y	8,5	247.4
b	5,3	250.6
y	3,5	252.4
bk	2,5	253.4
E	1,6	254.3

317 n of 7in

E	2,6	253.3
bk	3,2	252.7
y	5-6	250.3
bk	6,8	249.1
y	7,0	248.9
bk	6,8	249.1
W	7,0	248.9

47

255.86

310' N = S S of Grape St (75) Graded

W			6.9	249.0
bh			7.1	248.8
"			6.5	249.4
b			6.0	249.9
y			6.0	249.9
bh			6.0	249.9
E			4.9	251.0
TP	12.31	262.29	5.88	249.98

N Sin of Grape St

E			9.5	252.8
bh			10.4	251.9
y			10.3	252.0
b			10.4	251.9
y			10.8	251.5
bh			11.7	250.6
W			11.0	251.3

262.29

29 ch

4' N of Grape St

W			9.1	253.2
bh			8.3	254.0
y			7.6	254.7
b			7.0	255.3
y			6.7	255.6
bh			6.2	256.1
E			6.0	256.3

25' N Grape St

E			4.3	258.0
bh			4.5	257.8
y			5.0	257.3
b			5.4	256.9
y			6.1	256.2
bh			6.8	255.5
W			7.0	255.3

26229

50' n of Graphite

W	5.6	258.7
bk	5.3	257.0
y	5.0	257.3
b	4.5	257.8
y	3.6	258.7
bk	3.4	258.9
E	3.0	259.3

T.P. 7.27 26696 260 259.69

75' n of Graphite

E	6.9	260.1
bk	7.1	259.9
y	7.6	259.4
b	7.7	259.3
y	8.3	258.7
bk	8.6	258.4
W	9.1	257.9

26696

100' n of Graphite

W	8.2	258.8
bk	7.6	259.4
y	7.0	260.0
b	6.5	260.4
y	6.2	260.8
bk	6.0	261.0
E	5.8	261.2

125' n of Graphite

E	4.7	262.3
bk	5.3	261.7
y	5.7	261.3
b	5.7	261.3
y	6.5	260.5
bk	7.0	260.0
W	7.3	259.7

2677

	150'	n of	Grade	
W			6.6	260.4
bk			6.4	260.6
y			5.6	261.4
b			5.3	261.7
y			4.8	262.2
bk			4.3	262.7
E			4.1	262.9
	175'	n of	Grade	
E			3.4	263.6
bk			3.7	263.3
y			4.3	262.9
b			4.5	262.5
y			4.8	262.2
bk			5.7	261.3
W			6.0	261.0

2696

	200'	n of	Grade	
W			5.2	261.8
bk			4.8	262.2
y			4.2	262.8
b			3.8	263.2
y			3.4	263.6
bk			3.1	263.9
E			2.7	264.3
	225'	n of	Grade	
E			2.2	264.8
bk			2.5	264.5
y			2.8	264.2
b			3.1	263.9
y			3.5	263.5
bk			4.1	262.9
W			4.4	262.6
TP	688	270.02	3.82	263.4

27002

250' n of Grape st

W	6.8	2632
bb	6.5	2635
y	5.7	2643
b	5.5	2645
y	5.0	2650
bl	4.9	2651
E	4.8	2652

275' n of Grape st

E	3.8	2662
bb	4.2	2658
y	4.4	2656
b	4.9	2651
y	5.2	2648
bl	5.8	2642
W	6.1	2639

27002

300' n of S st of Hawthorne (80)

W	5.1	2649
bb	4.9	2651
y	4.8	2652
b	4.6	2654
y	4.0	2660
bl	3.6	2664
E	3.2	2668

S bl of Hawthorne st

E	3.1	2669
bb	3.4	2666
y	3.9	2661
b	4.2	2658
y	4.4	2656
bl	4.6	2654
W	5.2	2648

2700 2

S 1/4 of Hawthorn St

W	4,8	265.2
bb	4,3	265.7
y	4,2	265.8
L	3,9	266.1
y	3,7	266.3
bb	3,3	266.7
E	2,8	267.2

Center of Hawthorn

E	2,9	267.1
bb	3,1	266.9
y	3,4	266.6
b	3,7	266.3
y	4,0	266.0
bb	4,4	265.6
W	4,6	265.4

2700 2

N 1/4 of Hawthorn

W	4,5	265.5
bb	4,3	265.7
y	4,0	266.0
b	3,6	266.4
y	3,2	266.8
bb	3,0	267.0
E	2,7	267.3

N bb of Hawthorn

E	2,5	267.5
bb	3,0	267.0
y	3,2	266.8
b	3,5	266.5
y	3,9	266.1
bb	4,1	265.9
W	4,5	265.5

27002

	N Line of Hawthorne		
W		4,3	263.7
bb		4,0	266.0
y		3,7	266.3
b		3,4	266.6
y		3,3	266.7
bb		2,9	267.1
E		2,6	267.4
	25' n of	Hawthorne	
E		3,0	267.0
bb		3,4	266.6
y		3,4	266.6
b		3,6	266.4
y		3,8	266.2
bb		4,1	263.9
W		4,5	265.4

27002

	50' n of	Hawthorne	
W		5,1	264.9
bb		4,6	265.4
y		4,3	265.7
b		4,1	265.9
y		4,4	265.6
bb		5,2	264.8
E		5,3	264.5
	75' n of	Hawthorne	
E		13,0	257.0
bb		10,7	259.3
y		9,1	260.9
b		8,0	262.0
y		7,2	262.8
bb		6,7	263.3
W		7,0	263.0

		270.02		
	100	n of	Hawthorne St	
W			9.8	260.2
bb			10.5	259.5
TP	1.35	258.42	12.95	257.07
y			5.3	253.1
b			11.4	247.0
y			14.6	243.8
bb			11.5	246.9
E			8.6	249.8
20' E of E L			1.3	257.1
	94	n of	Hawthorne	
20' E of E L			4.0	254.4
E			12.3	246.1
bb			13.1	245.3
	116	n of	Hawthorne	
E			0.0	258.4
bb			8.0	250.4
y			14.4	244.0
+b			17.7	240.7
b				

		258.42		29th
	125	n of	Hawthorne	
b' E of E L			0.0	258.4
E			6.0	252.4
bb			10.4	248.0
y			15.2	243.2
b			18.9	239.5
y			13.8	244.6
bb			12.2	246.2
W			11.0	247.4
30' W of W L			11.0	247.4
	137	n		
E			+2.0	260.58
bb			9.0	249.4

		258.42		
6' E of E L	150'	n of	Hawthorne	
			0,0	258.4
E			6,0	252.4
bb			6,5	251.9
4			6,0	252.4
E			11,4	247.0
4			13,8	245,0
bb			18,6	239.8
W			23,0	235.4
30' W of W L			27,1	231.3
	166	n of	Hawthorne	
		268.27		
E			4,8	263.5
bb			6,1	262.2
4			9,1	259.2
	(no culvert required)			

		258.42		29 ft
	175'	n of	Hawthorne	
W			13,4	245,0
bb			10,2	248.2
4			8,6	249.8
b			5,2	253.2
TP	118.2	268.27	19,7	256.45
4			10,2	258.1
bb			5,6	262.7
E			4,3	264.0
	200'	n of	Hawthorne	
E			3,2	265.1
bb			4,1	264.2
4			5,0	263.3
b			5,7	262.6
4			6,6	261.7
bb			8,6	259.7
W			10,7	257.6
	204'	n	of Hawthorne	
W L			8,4	250.0

26827

225' n of Hawthorn

W	6.1	262.2
bk	5.2	263.1
y	4.8	263.5
b	4.2	264.1
y	3.5	264.8
bk	2.7	265.6
E	2.0	266.3

250' n of Hawthorn

E	1.1	267.2
bk	1.7	266.6
y	2.4	265.9
b	3.0	265.3
y	3.5	264.8
bk	3.9	264.4
W	4.2	264.1

26827

275' n of Hawthorn

W	3.1	265.2
bk	2.6	265.7
y	2.4	265.9
b	2.0	266.3
y	2.0	266.3
bk	1.4	266.9
E	0.2	268.0

298' n of Hawthorn

E	+0.3	268.6
bk	1.3	268.0
y	1.9	266.4
b	2.7	265.6
y	2.3	266.0
bk	2.2	266.1
W	2.3	266.0

26827

300' n = S of Ivy st (80')

W	2,3	266.0
bb	2,3	266.0
y	2,1	266.2
b	2,6	265.7
y	2,3	266.0
bb	1,9	266.4
E	3,2	265.1

S bb of Ivy st

E	3,5	264.8
bb	3,0	265.3
y	3,0	265.3
b	2,1	266.2
y	2,6	265.7
bb	2,3	266.0
W	2,0	266.3

26827

29th

S 1/4 of Ivy st

W	2,6	265.7
bb	2,3	266.0
y	3,0	265.3
b	2,7	265.6
y	2,6	265.7
bb	2,6	265.7
E	3,4	264.9

Center of Ivy st

E	3,0	265.0
bb	2,2	266.1
y	2,5	265.8
b	2,4	265.9
y	2,9	265.4
bb	2,9	265.4
W	3,0	265.3

26827

6' n of center of Hwy

W	3.0	265.3
bk	3.3	265.0
4	3.0	265.3
6	2.8	265.5
4	2.9	265.4
bk	2.1	266.2
E	3.3	265.0

N 1/4 of Hwy

E	3.3	265.0
bk	6.6	261.7
4	9.3	259.0
6	8.8	259.5
4	5.0	263.3
bk	3.3	265.0
W	2.5	265.8

26827

N bk of Hwy 2

W	4.8	263.5
bk	9.6	258.7
4		
6		
4		
bk		
E	3.2	265.1

N line of Hwy 2

E	3.0	265.3

TP	3.2	25859	12980 25547

N bk of Hwy 2

E bk	0.5	258.1
1/4	6.5	252.1
6	9.0	249.6
W 4	5.8	252.8

25859

	2 Line of	Ivy st		
WL			1,3	257,3
bh			8,1	250,5
4			13,0	245.6
b			16,6	242,0
4			9,4	249.2
bh			2,0	256.6
	25' n of	Ivy st		
c				
bh				
4			4,0	254.6
b			11,4	247,2
4			18,0	240.6
+3'			20,6	238.0
+8'			20,7	237.9
bh			18,5	240.1
W			13,4	245.2
10' w of WL			0,0 + up	258.6

25859

29th

	50' n of	Ivy st		
40' w of WL			16,0	242.6
25' W of WL			16,0	242.6
W			23,7	234.9
bh			21,9	236.7
4			13,2	245.4
b			8,7	249.9
	75' n of	Ivy st		
45' w of WL			28,7	229.9
22' w of WL			29,0	227.6
WL			20,7	237.9
bh			16,0	242.6
4			10,2	248.4
b			4,8	253.8

(No Culvert)

		258.59			
	100'	n f	Ivy st		
40' W of WL	Slope continues same		23.7	244.9	
WL			11.0	247.6	
bb			7.7	250.9	
4			3.4	255.2	
TP	12.76	268.23	3.12	255.47	near PL
	25'	n f	Ivy st		
EL			4.0	264.2	
bb			9.1	259.1	
	50'	n f	Ivy st		
EL			+0.2	268.4	
E bb			5.6	262.6	
E 4			11.3	256.9	
	75	n f	Ivy st		
EL			+0.5	268.7	
bb			4.9	263.3	
4			9.7	258.5	

		268.23			29 [illegible]
	100'	n f	Ivy st		
EL			—		
bb			0.4	267.8	
4			2.0	266.2	
b			8.3	259.9	
TP	10.87	277.90	1.20	267.03	
	100'	n f	Ivy		
EL			8.9	269.0	
	125'	n f	Ivy st		
EL			7.9	270.0	
bb			9.2	268.7	
4			10.4	267.5	
b			11.7	266.2	
4			13.2	264.7	
bb			15.0	262.9	
WL			17.3	260.6	

27790

	150'	n f	Ivy	st
W L			16.3	261.6
bh			14.3	263.6
y			12.9	265.0
b			11.3	266.6
y			8.9	269.0
bh			8.1	269.8
E			7.8	270.1
	175'	n f	Ivy	
E			6.3	271.6
bh			8.3	269.6
y			9.4	268.5
b			11.4	266.5
y			14.3	263.6
bh			16.4	261.5
W			18.2	259.7

27790

	200'	n f	Ivy	st
10' W			20.0	257.9
W			17.8	260.1
bh			12.0	265.9
y			8.4	269.5
b			6.2	271.7
y			2.8	275.1
bh			2.0	275.9
			2.0	275.9
E			3.7	274.2
	225'	n f	Ivy	st
E			2.3	275.6
bh			0.6	277.3
y			0.0	277.9
b			3.5	274.4
y			7.6	270.3
bh			12.5	265.4
W				

277.91

	250' n of	Inv	
E		2.3	276.4
bk		0.3	277.6
✓		0.8	277.1
b		5.5	272.4
✓		9.0	268.9
bk		13.0	264.9
	275' n of	Inv ↓	
E		5.3	272.6
bk		4.5	273.4
✓		5.0	272.9
b		6.0	271.9
✓		7.4	270.5
bk		10.0	268.9
TP	5.32	274.24	8.98	268.92

(No culvert required)

274.24

	225' n of	Inv	
WL		17.2	257.0
30' w of WL			235.8
55' w of WL + Slope down			227.8
	250' n of	Inv	
WL		16.6	257.6
30' w of WL Level w of this			241.0
	275' n of	Inv	
WL		10.6	263.6
15' w of WL Level west of this			255.60

Elevate for blades

	0.60	261.60	13.24	261.00
15' w of WL			6.0	255.60
TP	0.0	248.77	12.83	248.77
			13.0	235.8
			7.7	241.0
			21.0	227.8

235' n of Inv

55' w of WL 228.0

274.24

300' N = S L of Juniper st (80) (Graded)

W			9,2	265.0
bh			9,4	264.8
y			8,9	265.3
b			8,2	266.0
y			7,8	266.4
bh			7,4	266.8
E			7,3	266.9

N Line of Juniper st

N of Juniper 29th st is 25' E of S side

W			7,2	267.0
bh			7,1	267.1
y			6,1	268.1
b			5,6	268.6
y			5,2	269.0
bh			5,2	269.0
E			4,2	270.0
TP	7,37	28077	0,84	273.40

28077

29th

2' N of Juniper st

E			3,9	276.9
bh			5,2	275.6
y			6,0	274.8
b			6,7	274.1
y			7,5	273.3
bh			8,4	272.4
W			9,4	271.4

25' N of Juniper

W			8,4	272.4
bh			7,8	273.0
y			6,7	274.1
b			5,6	275.2
y			5,2	275.6
bh			4,0	276.8
E			2,6	278.2

28077

50' n of Juniper St

E	2.3	278.5
bk	4.5	276.3
y	4.5	276.3
b	5.4	275.4
y	6.0	274.8
bk	6.9	273.9
W	7.9	272.9

75' n of Juniper St

W	7.7	273.1
bk	6.7	274.1
y	5.9	274.9
b	5.7	275.7
y	4.3	276.5
bk	3.3	277.5
E	1.5	279.3

28077

100 n of Juniper St

E	0.8	280.0
bk	2.7	278.1
y	4.0	276.8
b	5.2	275.6
y	6.1	274.7
bk	7.0	273.8
W	7.7	273.1

125' n of Juniper St

W	8.8	272.0
bk	8.0	272.8
y	6.8	274.0
b	6.0	274.8
y	4.1	276.7
bk	2.4	278.4
E	0.6	280.2

28077

154° $n = p.d$

E	3,5	277.3
h	4,3	276.5
y	6,6	274.2
l	8,5	272.3
y	10,3	270.5
H	11,7	269.6
W	12,7	268.6

Clough Fitz Shaw X sec of Goldfinch St (60')
Barr 380' north

	4.90	254.15		249.25	SE Prop Stoke Barr & Hawk
TP	1.29	245.73	10.21	243.94	
	N S of Barr St				
W			2.1	243.1	
bb			2.2		
y			1.6		
b			1.1	244.	
y			1.4		
bb			1.9		
E			2.5	242.7	

245.73

Goldfinch

	25'	n of	Barr St		
E			4.0	241.2	
bb			4.2		
y			4.4		
b			4.8	240.4	
y			5.0		
bb			5.3		
W			5.4	239.8	
	50'	n of	Barr St		
W			8.3	236.9	
bb			8.3		
y			8.1		
b			7.6	237.6	
y			6.7		
bb			6.6		
E			5.8	239.4	

245-23

	75'	n f	Barn	
E			8.9	236.3
bk			9.4	
4			9.8	
b			9.9	235.3
4			10.0	
bk			10.7	
W			10.8	234.4
	100	n f	Barn	
W			13.0	232.2
bk			13.2	
4			13.0	
b			14.5	232.7
4			11.8	
bk			10.5	
E			9.2	236.0

245-23

	125'	n f	Barn	
E			9.2	236.0
bk			9.5	
4			13.8	
	145'	n f	Barn	
E			10.0	235.2
bk			10.4	
	150'	n f	Barn	
E			12.3	232.9
TP	0.10	23301	12.2	23291
	125'	n f	Barn	
E 1/4			1.6	
b			3.0	230.0
4			4.0	
bk			4.4	
W			3.6	229.4
	145'	n f	Barn	
E 1/4			4.7	

X3301

	150'	n/f	Barn	
W			9.8	223.2
bl			10.0	
y			9.8	
b	76'		7.7	
			5.6	227.4
y			5.0	
bl			2.4	
E			0.90	232.9
	175'	n/f	Barn	
E			4.5	228.5
bl			5.4	
	+11'		5.7	
y			8.8	
b			11.0	222.0
y			13.3	
bl			16.4	
	+ 5'		21.0	
W			18.0	215.0

X3301

Goldfinch

	200'	n/f	Barn	
E			8.0	225.0
bl			9.5	
y			11.2	
b			15.3	217.7
TP	0.22	22044	12.79	X2012
y			6.8	
bl			10.0	
W			12.4	208.0
	225'	n/f	Barn	
W			17.7	202.7
bl			13.3	
y			10.0	
b			6.0	214.4
y			3.3	
bl			0.8	
E			+0.5	220.9

		220,44		
	250	n f	Barr	
E			2,8	212.6
bh			4,8	
y			7,0	
b			9,0	211.4
y			13,0	
	275	n f	Barr	
E			7,0	213.4
bh			9,7	
y			12,0	
b			18,0	202,4
TP	-0,07	207,60	12,77	207,67
	250	n f	Barr	
W L			12,0	195.6
bh			5,9	

		207,60		
	275	n f	Barr	
W W			—	
bh			14,4	
y			7,8	
	300	n f	Barr	
E			0,2	207,4
bh			1,7	
y			4,0	
b			8,0	199.6
y			13,8	
	325	n f	Barr	
E			5,3	202.3
bh			7,6	
y			9,4	
b			14,2	193.4
	347			
E			11,0	196.6
TP	0,90	195,40	13,10	194,50

		195.40		
	350'	n of	Barr	
E			2.5	192.9
bl			7.0	
4			12.0	
b				
	380'	n =	Pueblo Sa	
E			18.5	176.9
	275'	n of	Barr	
W L			11.5	183.9
	300'	n of	Barr	
W L			18.2	182.2
+x'			16.4	
bh			8.5	
	325'	n of	Barr	
W			19.4	176.0
+4'			24.2	
bh			18.0	

		195.40		
	350'	n of	Barr	
W			25.0	170.4
bh	Butte		33.0	162.4
	380'	n =	Pueblo Sa	
W			23.00	172.4
bent			43.4	152.4

8189

#400

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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.		