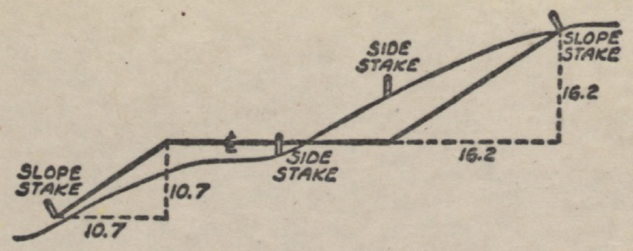
TIE POINT 40

T.P. 40

40 FAIRMOUNT



Distances from Side Stakes for Cross-Sectioning

Slope 1 to 1. Roadway of Any Width

	0	.1	.2	.3	.4	.5	.6	.7	.8	9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

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

TIE POINT -40

IMPROVED TABLES
AND
INFORMATION

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"P" Line Curve 108+85.52 to 128+47.05

+25	1° 25' 37"	
110 ~	1° 10' 17"	
+75	0° 54' 56"	
+50	0° 39' 35"	
+36	0° 30' 59"	
+26	0° 24' 51"	
+25	0° 24' 14"	
109 ~	0° 08' 54"	
1448		
*108+85.52 B.C.	0° 00' 00"	

Δ = 40° 08' 18"
R = 2800
T = 1022.95
L = 1961.95
d = .6138833'

+70	2° 54' 38"	
+50	2° 42' 22"	
+45	2° 39' 18"	
+25	2° 27' 01"	
+20	2° 23' 57"	
111 ~	2° 11' 40"	
+90	2° 08' 36"	
+75	1° 56' 19"	
+70	1° 53' 15"	
110+50	1° 40' 58"	

+75	5° 00' 29"	
13+54.59 P.O.C.	4° 47' 57"	39' Rt to New "D" Line tie
+50	4° 45' 08"	
+25	4° 29' 47"	
113 ~	4° 14' 27"	
+75	3° 59' 06"	
	Tied out Radial to west in new A.C. 9.86 to Pk & 35.65 more to Pk.	
P.O.C. 38.38 +61.62 = 0+00 "D" 39° Rt.	3° 50' 53" ← From E.C.	
	3° 49' 20" From BC	
+50	3° 43' 45"	
+25	3° 28' 24"	
112 ~	3° 13' 03"	
111+75	2° 57' 42"	

116 ~	7° 18' 36"	36.6 Lt to "A" extended
+75	7° 03 16"	35.4 Lt to "A" extended
+50	6° 47' 55"	34.3 Lt to "A" extended
+46	6° 39' 19"	end "E" cb 34° Lt to "A" extended
+25	6° 32' 34"	
115 ~	6° 17' 13"	
+90	6° 11' 05"	
+75	6° 01' 52"	
+70	5° 58' 48"	
+50	5° 46' 32"	
+25	5° 31' 11"	
114 ~	5° 15' 50"	

118~	9° 21' 23"	✓
+75	9° 06' 02"	
+50	8° 50' 41"	✓
+25	8° 35' 21"	
+24	8° 34' 44"	
117~	8° 20' 00"	✓
+75	8° 04' 39"	
+61.06	7° 56' 05"	154.26 Rt to ℄ Channel
+50	7° 49' 18"	✓
Tied out Radial to West in New A.C.		
9.74 to Rk.	$31.54 more to Rk.	
P.O.C. +46.06 = 121.95 "A" 39° Lt.	7° 46' 53"	39° Lt to "A" extended ✓
116+25	7° 33' 57"	37.8 Lt to "A" extended

+50	10° 53' 28"	✓
+25	10° 38' 07"	
+23.79	10° 37' 22"	
+13.90	10° 31' 18"	
119~	10° 22' 46"	✓
+75	10° 07' 26"	
+55.06	9° 55' 11"	"C" t.
+50	9° 52' 05"	✓
+35.25	9° 43' 00"	
P.O.C. +32.40 = 07.00 "C" 40° Rt.	9° 41' 16½"	B.C. Channel 114.9 Rt.
+25	9° 36' 44"	
+19	9° 33' 03"	
118+07	9° 25' 41"	

(49.18 = CHORD FOR 46' RT OF ℄)

Tied out Radial to West in New AC
22.67 to P.K. & 72.63 more to Chis. x in Headwall

121~ P.O.C.	12° 25' 33"	83° Rt to end box culvert begin channel	+75	14° 12' 59"	
			57 (5°) mea +57.02	14° 01' 56½"	"P" int. "D" 10+66.67 we hope
+75	12° 10' 12"			14° 02' 14" 18	10+66.78 mea
			+50	13° 57' 38"	
✓ +52.35	11° 56' 18"	P.O.C. channel 83° Rt.			
			+37	13° 49' 39"	83° Rt to "U" channel end
+50	11° 54' 51"				
			+31.65	13° 46' 22"	69° Rt to Sly Column Bent #2
+25	11° 39' 30"				
			+25	13° 42' 17"	
+04	11° 26' 37"				
			122~	13° 26' 56"	69° Rt to Nly column Bent #2
120~	11° 24' 10"				
			+75	13° 11' 36"	
119+75	11° 08' 49"				
			+50	12° 56' 15"	
119+73	11° 07' 35"	"J" inlet			
			121+25	12° 40' 54"	

+50	16° 00 25"	
+25	15° 45 04"	
124~	15° 29 43"	
+75	15° 14 22"	
+67	15° 09 27"	81$ Rt channel tangent layout
+50	14° 59 01"	
+25	14° 43 40"	
+14	14° 36 55"	81$ Rt Channel tangent layout
123~	14° 28 20"	
122+90	14° 22 11"	Pipe to Culvert local area drain

127~	18° 33 53"	
+75	18° 18 32"	"J" inlet
+65	18° 12 24"	Pipe to culvert Local area drain
+50	18° 03 11"	
+25	17° 47 50"	
126~	17° 32 30"	
+75	17° 17 09"	
+50	17° 01 48"	POLE (LEFT OUT)
+25	16° 46 27"	
125~	16° 31 06"	
124+75	16° 15 45"	

(E.C. TIED 25' ℄ 50' @ 90° WLY.
P.K.'S IN NEW A.C.)

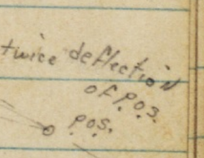
447.05 E.C.	20° 04' 09"
425	19° 50' 37"
128	19° 35' 16"
475	19° 19' 55"
450	19° 04' 34"
441	18° 59' 03
127+25	18° 49' 14"

	"P-3" 149+83.37 to 150+01.02		
			Tangent offset to spiral
+50	0° 35' 46"	39°Lt ℄ "Lane ℄ 48°Lt Shldr ℄	1.73
+42.13 (See 20 scale)	0° 32' 28"		1.50
+25	0° 25' 50"		1.06
151 ~	0° 17' 31"	"J" Inlet	0.59
+75	0° 10' 49"		0.29
+50	0° 05' 43"		0.11
+25	0° 02' 14"		0.03
150 ~	0° 00' 21"		0.00
16.63			
149+83.37 "P-3"	0° 00' 00"	P.S.	0.00
149+83.37 "P" =5			

$\Delta_s = 6°30'00"$
$L_s = 317.65$
$X = 317.24$
$Y = 12.00$
$C_s = 317.47$
$p = 3.00$
$q = 158.76$

$a = 1.288$
$f = .001288$
$f\,6h = 0°00'.535486'$
$2f6h = 0°01'.070972$

(2) twice deflection of P.O.S. puts one tangent to P.O.S. by backsighting on P.S. thusly



	$\frac{\Delta s}{2}$ = ✓ 2° 10' 00"	
	+01.02 P.S.C. ✓ 2° 09' 57"	12.00
153 ~	2° 09' 07"	11.97
+75	1° 49' 32"	9.29
+50	1° 31' 34"	7.10
+25	1° 15' 12"	5.28
152 ~	1° 00' 27"	3.81
151+75	0° 47' 18"	2.64

"P-3" 153+01.02 to 160+06.52

155 ~	4° 04' 18"
+75	3° 33' 36"
+50	3° 02' 55"
+25	2° 32' 13"
+02	2° 03' 59"
Stop 154 ~	2° 01' 32"
+75	1° 30' 50"
+50	1° 00' 08"
+25	0° 29' 27"
153+01.02 P.S.C.	0° 00' 00'

39°L+ to 10+55.37 "E" line

Δc = 28° 52' 23"
½Δc = 14° 26' 11½"
Rc = 1400
Lc = 705.50

d_1 = 1.22477667

+25	8° 40' 33"
+24.23	8° 39' 36"
157 ~	8° 09' 51"
+75	7° 39' 10"
+50	7° 08' 28" START 11-17-59
+25	6° 37' 46"
156 ~	6° 07' 05"
+75	5° 36' 23"
+50	5° 05' 41"
+45	4° 59' 23"
155+25	4° 35' 00"

159~	12° 15' 24"	
+ 75	11° 44' 43"	
+62.00	11° 28' 45"	℄ Bent #3
+ 50	11° 14' 01"	
+25	10° 43' 20"	
	10 31 37	∠ 9+21.59
+ 14.37 (p-3) (ok)	10° 30' 25"	9+21.26 Aldine ℄s intersection
	10 29 13	
STOP 158~	10° 12' 38"	
+75.00	9° 41' 56"	℄ Bent #2
+50	9° 11' 15"	
157+26	8° 41' 46"	℄ Abut #1 pilling

14 26 11
42 00
1846 11

+06.52 P.C.S.	14° 26' 11½"	STOP
160~	14° 18' 11"	
+75	13° 47' 30"	
+68	13° 38' 54"	2° Lt to ℄ SMH #4 new
+50	13° 16' 48"	
+30	12° 52' 15"	Headwall of pipe inlet drain to Aldine
+25	12° 46' 06"	
+12.58	12° 30' 51"	
159+11.00	12° 28' 55"	℄ Abut #4 pilling

	"P-3" 160+06 52 to 163+26 34	
162 ~	3° 09' 20"	✓
+75	2° 50' 18"	✓
+50	2° 29' 39"	✓
+26	2° 08' 18"	93° Rt to 48" RCP end use P.C.S. backsite 1° 49' 55" to get tangent to P.O.S.
+25	2° 07' 23"	✓
161 ~	1° 43' 31"	✓
+75	1° 18' 02"	✓
+50	0° 50' 57"	✓
160+25	0° 22' 15"	✓
160+06 52 P.C.S.	0° 00' 00"	

$\Delta_s = 6° 30' 00"$
$L_s = 317\ 65$
$X = 317\ 24$
$Y = 12\ 99$
$C_s = 317\ 47$
$p = 3\ 00$
$\theta = 158\ 76$

$a = 1.288$
$f = .001288$
$f6h = .595056$
$2f6h = 1.190112$
$dh = 30.6941675$
$dh - 2f6h = 29.5040555$

10

4 20 00
14 26 12
18° 46' 12

+26 34 Ah.		
+24 17 =s P.T. BK	4° 20' 00"	✓
163 ~	4° 09' 24"	✓
+75	3° 56' 48"	✓
+50	3° 42' 35"	✓
162+25	3° 26' 46"	✓

27.50

"A" Line

7+00 P.O.C.	9° 03' 10"	✓
6+75	7° 51' 33"	
6+50	6° 39' 56"	✓
6+25	5° 28' 18"	
6+00	4° 16' 41"	✓
5+75	3° 05' 04"	
5+50	1° 53' 27"	✓
50' C = 49.99 25' C = 25.00		
5+25	0° 41' 50"	
C = 14.60		
5+10.40 Ah. BC. =S 5+09.84 BK	0° 00' 00"	R.P. 99.14 LINE ONLY

Δ = 43° 16' 05" mea
½Δ = 21° 38' 02½"
R = 600
T = 237.97

L = 453.09
d_1 = 2.864789

9+25	19° 47' 45"	
9+00	18° 36' 07"	✓
8+89	18° 04' 36"	
8+75	17° 24' 30"	✓
8+50	16° 12' 53"	✓
8+25	15° 01' 16"	✓
8+00	13° 49' 39"	✓ P.O.C.
7+75	12° 38' 01"	✓
7+50	11° 26' 24"	✓
7+25	10° 14' 47"	

9+62.64 Ah
=S
9+63.49 BK F.C. 21° 38' 02½"
C = 13.49
9+50 20° 59' 22"

"B" Line

$\Delta = 101° 00'$ $T = 363^{93}$
$\frac{1}{2}\Delta = 50° 30'$ $L = 528^{83}$
$R = 300$ $d_1 = 5.729578$

6+75 ✓ P.O.C.	19° 14' 34"	
6+50	16° 51' 20"	
6+25	14° 28' 05"	
6+00 P.O.C.	12° 04' 51"	
5+75	9° 41' 37"	
5+50	7° 18' 22"	
5+25	4° 55' 08"	
50c = 49.94 25'c = 24.99		
5+00	2° 31' 53"	c = 23.91
c = 26.50		c = 25.35
4+73.49 Ah	0° 00' 00"	R = 287
=S 4+72.86 Bk		

9+00	40° 43' 43"
8+75	38° 20' 29"
8+50	35° 57' 15"
8+25	33° 34' 00"
8+00	31° 10' 46"
7+75	28° 47' 32"
7+50	26° 24' 17"
7+25	24° 01' 03"
7+00	21° 37' 48"

16+12.36 "D"		
=S		
10+02.32 "B" EC	50° 30' 00"	
C=27.31		
9+75	47° 53' 27"	
C=52.25		
9+53	45° 30' 12"	
9+25.0	43° 06' 58"	

"C" Line

see pg 37

changed

1+50	58° 04' 10"	116° 08' 20"
1+30	50° 19' 38"	100° 39' 16"
1+00	38° 42' 48"	77° 25' 36"
0+80	30° 58' 15"	61° 56' 30"
0+60	23° 13' 41"	46° 27' 22"
0+40	15° 29' 07"	30° 58' 14"
0+20	7° 44' 34"	15° 29' 08"
0+15.07	5° 49' 58"	11° 39' 56"
0+00 "C"	0° 00'	0° 00'

118+32.40 P.T.

Δ = 162° 23' 05"
½Δ = 81° 11' 32½"
R = 74.00
L = 209.73
d_1 = 23.22802

2+09.73	81° 11' 32½"	162° 23' 05"
2+00	77° 25' 33	154° 51' 06"
1+79.33	69° 25' 24"	138° 50' 48"
1+70	65° 48' 43"	131° 37' 26"

"D" Line

Changed see pg 36 - 35

$\Delta = 29° 01' 30''$
$\frac{1}{2}\Delta = 14° 30' 45''$
$R = 300$
$L = 151.97$
$T = 151.97$
$d_1 = 5.729578$

3+15.09	14° 30' 45"	345° 29' 15"
C=15.09		
3+00	13° 04' 16"	346° 55' 44"
2+75	10° 41' 01"	349° 18' 59"
2+50	8° 17' 47"	351° 42' 13"
2+25	5° 54' 33"	354° 05' 27"
2+00	3° 31' 18"	356° 28' 42"
C=24.99		
1+75	1° 08' 04"	358° 51' 56"
C= 11.88		
1+63.12 B.C.	0° 00'	360° 00'

$\Delta = 7° 20'$
$\frac{1}{2}\Delta = 3° 40'$
$R = 400$
$L = 5.20$
$T = 2.593$
$d_1 = 4.297183$

FAIRMOUNT AVE.
ACCESS ROAD

℄	CB.
R = 48.0'	R = 30.76'
Δ = 127°30'	Δ = 127°30'
L = 106.81	L = 68.45'
D_1 = 35.80985	D_1 = 55.88

1+06.44 = E.C. Δ = 127°30'

0+75 Δ = 89°31'28"

0+43 Δ = 51°19'39"

0+35 Δ = 41°46'41"

STA. 205+61 "FRFS" LINE =
STA. 0+00 ACCESS ROAD

CURVE #2
Δ = 30°13'10"
R = 500'
T = 135.00
L = 263.71
D, = 3.437746

CURVE #3
Δ = 34°51'29"
R = 439.0'

changed

9+64.78 = B.C.

9+49.23 = E.C.

chd. = 49.21

9+00

changed

+50

8+00

+50

chd. = 49.98

7+00

chd. = 14.47

6+85.52 = B.C.

15°06'34"

12°17'20"

9°25'26"

6°33'33"

3°41'40"

0°49'48"

0°00'00"

"E" RAMP

+81.50	-24.5 Rt. END 45" Pipe	17°01'36"
+75		16°25'18"
+50		14°04'50"
+34.50		12°37'49"
+25		11°44'27"
3+00		9°24'00"
+89.50		8°25'01"
+75		7°03'45"
+50		4°43'10"
+25		2°22'44"
2+00		0°02'18"
1+99.59 = B.C. "E"		

Δ = 44°32'43"
½Δ = 22°16'215"
R = 306'
T = 125.33'
L = 237.90
D, = 5.6172

10+56.48 "E" =s 153+01.02 P-3
← 39°Lt

4+82.19 "E" goes 12° Wly =s 1+07.14 E-1)

4+37.49 = E.C.	22°16'215"
+25	21°06'10"
4+00	18°45'45"

Aldine

38°Lt to drain

7+26	9° 25' 09"	omit
7+25	9° 20' 52"	✓
7+00	7° 33' 38"	✓
6+75	5° 46' 24"	✓
18°Rt CG PCC 6+67 30	5° 13' 22"	✓
6+50	3° 59' 10"	✓
6+25	2° 11' 56"	✓
6+00	0° 24' 42"	✓
5+94 24 BC.	0° 00'	

Δ = 19° 15' 20"
½Δ = 9° 37' 40"
R = 400.74
L = 134 68
T = 67 98

d_1 = 4.289 2.48

7+28 92 EC.	9° 37' 40" ✓

"P 4"

173+53.57 to 180+18.02

No chord cut.

+25	4°05'34"	355°54'26"
175~	3°29'45"	356°30'15"
+75	2°53'56"	357°06'04"
+50	2°18'07"	357°41'53"
+25	1°42'19"	358°17'41"
174~	1°06'30"	358°53'30"
+75	0°30'42"	359°29'18"
+60	0°09'13"	359°50'47"
173+53.57 = B.C.		0°00'

Δ = 31°43'30"
R = 1200'
T = 340.98
L = 664.45
D, = 1.4324

Δ = 9°18'22" #1
R = 1200'
T = 97.67
L = 194.91

+50	9°27'51"	350°32'09"
+25	8°52'02"	351°07'58"
177~	8°16'13"	351°43'47"
+75	7°40'25"	352°19'35"
+50	7°04'36"	352°55'24"
+25	6°28'48"	353°31'12"
176+00	5°53'00"	354°07'00"
+75	5°17'11"	354°42'49"
175+48.48	4°39'11"	355°20'49"

(PCC ↔ P-5 Line
All pg — 33 —)

	"P.4"		(CONTINUED)	
+50	14°14'20"	345°45'40"		
+25	13°38'31"	346°21'29"		
179~	13°02'42"	346°57'18"		
+75	12°26'54"	347°33'06"		
+50	11°51'05"	348°08'55"		
+25	11°15'17"	348°44'43"		
178~	10°39'28"	349°20'32"		
+75	10°03'40"	349°56'20"	180+18.02 = E.C.	15°51'45" 344°08'15"
177+60	9°42'10"	350°17'50"	180~	15°25'57" 344°34'03"
			179+75	14°50'08" 345°09'52"

"P 4"

$\Delta = 9°58'16"$
$R = 1000'$
$T = 87.23$
$L = 174.03$
$D_1 = 1.7887338$

No chord cut.

184+03.61 = E.C	4°59'08"	355°00'52"
184 ~	4°52'56"	355°07'04"
+75	4°09'58"	355°50'02"
+50	3°27'00"	356°33'00"
+25	2°44'00"	357°16'00"
183 ~	2°01'02"	357°58'58"
+75	1°18'04"	358°41'56"
+50	0°35'06"	359°24'54"

182+29.58 = B.C.

MONTEZUMA ROAD

2+06 62 To 26+62 95 changed to fit

CURVE #1

Δ = 45° 38' 50"
R = 2000
L = 1593 38

~~Δ = 70° 22' 07"~~
~~½Δ = 35° 11' 035"~~
~~R = 2000'~~
~~L = 2456.33~~

d_1 = 0.8594365

⅓Δ = 23° 27' 22" C = 813 02
⅙Δ = 11° 43' 41"

4+00	2° 46' 12"	357° 13' 48"	6+00 P.O.C.	5° 38' 05"	354° 21' 55"
+75	2° 24' 43"	357° 35' 17"	+83 = ℄ Drive	5° 23' 29"	354° 36' 31"
+50	2° 03' 13"	357° 56' 47"	+75	5° 16' 36"	354° 43' 24"
+25	1° 41' 44"	358° 18' 16"	+50	4° 55' 07"	355° 04' 53"
3+00	1° 20' 15"	358° 39' 45"	+25	4° 33' 38"	355° 26' 22"
+75	0° 58' 46	359° 01' 14"	5+00	4° 12' 08"	355° 47' 52"
+50	0° 37' 17"	359° 22' 43"	+75	3° 50' 40"	356° 09' 20"
+25	0° 15' 48"	359° 44' 12"	+50	3° 29' 10"	356° 30' 50"
18 38					
2+06 62 = B.C.	0° 00'	0° 00'	4+25	3° 07' 41"	356° 52' 19"

+25	8°51'28"	351°08'32"	+50	12°04'50"	347°55'10"
			P.O.C. 1/3 10+25 40	11°43'41"	Long chord 348°16'19"
8+00	8°29'58"	351°30'02"	+25	11°43'21"	348°16'39"
+75	8°08'29"	351°51'31"	P.O.C. 10+00	11°21'52"	348°38'08"
+50	7°47'	352°13'00"	+75	11°00'23"	348°59'37"
+25	7°25'31"	352°34'29"	+50	10°38'53"	349°21'07"
7+00	7°04'02"	352°55'58"	+25	10°17'24"	349°42'36"
+75	6°42'32"	353°17'28"	9+00	9°55'55"	350°04'05"
+50	6°21'04"	353°38'56"	+75	9°34'26"	350°25'34"
6+25	5°59'34"	354°00'26"	8+50	9°12'57"	350°47'03"

+75	15°18'13"	344°41'47"	15+00	18°31'35"	341°28'25"
+50	14°56'43"	345°03'17"	+75	18°10'06"	341°49'54"
+25	14°35'14	345°24'46"	+50	17°48'37"	342°11'23"
12+00	14°13'45"	345°46'15"	+25	17°27'07"	342°32'53"
+75	13°52'16"	346°07'44"	14+00 POC	17°05'38"	342°54'22"
+50	13°30'47"	346°29'13"	+75	16°44'09"	343°15'51"
+25	13°09'17"	346°50'43" SET	+50	16°22'40"	343°37'20"
11+00	12°47'49"	347°12'11"	+25	16°01'11"	343°58'49"
10+75	12°26'19"	347°33'41"	13+00	15°39'41"	344°20'19"

337° 10' 35"
12° 22' 00"
349° 48' 35"

NEW CURVE @ 18+00

Δ = 24° 44' 00"
T = 437.26
R = 1994.30
L = 860.90

D, = .8618911
½Δ = 12° 22' 00"
No CUT ON CHORDS

17+00	21° 23' 28"	338° 36' 32"	+25	1° 47' 45"	358° 12' 15"
+75	21° 02' 00"	338° 58' 00"	19+00	1° 26' 11"	358° 33' 49"
+50	20° 40' 30"	339° 19' 30"	+75	1° 04' 38"	358° 55' 22"
+25	20° 19' 00"	339° 41' 00"	+50	0° 43' 05"	359° 16' 55"
16+00	19° 57' 31"	340° 02' 29"	+25	0° 21' 33"	359° 38' 27"
+75	19° 36' 02"	340° 23' 58"	18+00 =	22° 49' 25"	337° 10' 35"

P.C.C. here changed to 17 — 00

+69.25	19° 31' 05"	340° 28' 55" ?	+75	22° 27' 55"	337° 32' 05"
+50	19° 14' 33"	340° 45' 27"	+50	22° 06' 26"	337° 53' 34"
15+25	18° 53' 04"	341° 06' 56"	17+25	21° 44' 57"	338° 15' 03"

P.O.C.	P.O.C.	
+50	5° 01' 40"	354° 58' 20"
+25	4° 40' 07"	355° 19' 53"
21+00	4° 18' 34"	355° 41' 26"
+75	3° 57' 00"	356° 03' 00"
+50	3° 35' 28"	356° 24' 32"
+25	3° 13' 54"	356° 46' 06"
20+00	2° 52' 23"	357° 07' 37"
+75	2° 30' 48"	357° 29' 12"
19+50	2° 09' 17"	357° 50' 43"

+75	8° 15' 35"	351° 44' 25"
+50	7° 54' 00"	352° 06' 00"
+45	7° 49' 44"	352° 10' 16"
+25	7° 32' 30"	352° 27' 30"
23+00	7° 10' 56"	352° 49' 04"
+75	6° 49' 23"	353° 10' 37"
+50	6° 27' 51"	353° 32' 09"
+25	6° 06' 18"	353° 53' 42"
22+00	5° 44' 45"	354° 15' 15"
21+75	5° 23' 13"	354° 36' 47"

26+00	11°29'30"	348°30'30"		
+75	11°08'00"	348°52'00"		
+50	10°46'25"	349°13'35"		
+25	10°24'52"	349°35'08"		
25+00	10°03'20"	349°56'40"		
+75	9°41'45"	350°18'15"		
+55	9°24'32"	350°35'28"	26+59 44 AHEAD	
+50	9°20'13"	350°39'47"	26+60 2D 12°22'00" BK. =	347°38'00"
+25	8°58'40"	351°01'20"	+50 12°12'36"	347°47'24"
24+00	8°37'08"	351°22'52"	+25 11°51'03"	348°08'57"

MONTEZUMA RD.

30+86.02 TO 42+25.53
CURVE # 2

+75	3°52'00"	4
+50	3°21'20"	4
+25	2°50'38"	4
32 –	2°19'56"	4
+75	1°49'15"	4
+50	1°18'33"	4
+25	0°47'52"	4
31 –	0°17'10"	4
30+86.02 = B.C.	0°00'	

Δ = 46°38'07"
½Δ = 23°19'035"
R = 1400'
L = 1139.51

d1 = 1.2278 (30°)

35+00	8°28'17"	4
+75	7°57'34"	4
+50	7°26'53"	4
+25	6°56'12"	4
34+00 P.C.	6°25'30"	4
+75	5°54'49"	4
+50	5°24'07"	4
+25	4°53'25"	4
33+00	4°22'43"	4

+25	13°04'32"	4
37~ P.O.C.	12°33'50"	4
+75	12°03'09"	4
+50	11°32'27"	4
+25	11°01'45"	4
36~	10°31'04"	4
+75	10°00'22" P.O.C.	4
+50	9°29'40"	4
35+25	8°59'00"	4

+50	17°40'48"	4 4
+25	17°10'06"	4 4
39~	16°39'24" P.O.C.	4
+75	16°08'43"	4
+50	15°38'00"	4
+25	15°07'20"	4
38~	14°36'37"	4
+75	14°05'55"	4
37+50	13°35'14"	4

+75	22°17'03"	44		
+50	21°46'21"	44		
+25	21°15'40"	44		
41~	20°44'58"	44		
+75	20°14'16"	44		
+50	19°43'34"	44		
+25	19°12'53"	44		
40~ POC	18°42'11"	44	42+25.53 = E.C.	23°19'035" SET
39+75	18°11'30"	44	42~	22°47'45" 44

PC-5 Line

Δ = 55° 36' 50"
R = 499.75
T = 262.51
L = 483.14

d = .3453285
50'c = 49.98

begin Lerm +65	12° 27' 42"	347° 32' 18"		
			+75	24° 32' 52"	335° 27' 08"
+50	11° 35' 54"	348° 24' 06"		
			+50	23° 06' 31"	336° 53' 29"
+25	10° 09' 34"	349° 50' 26"		
			+25	21° 40' 12"	338° 19' 48"
177 ~	8° 43' 13"	351° 16' 47"		
			179 ~	20° 13' 52"	339° 46' 08"
+75	7° 16' 54"	352° 43' 06"		
			+75	18° 47' 32"	341° 12' 28"
+50	5° 50' 34"	354° 09' 26"		
			+50	17° 21' 12"	342° 38' 48"
176 +25	4° 24' 15"	355° 35' 45"		
			+25	15° 54' 53"	344° 05' 07"
176 ~	2° 57' 54"	357° 02' 06"		
			178 ~	14° 28' 33"	345° 31' 27"
175 +75	1° 31' 34"	358° 28' 26"		
			177 +75	13° 02' 12"	346° 57' 48"
175 +48.48 P.C.C.	0° 00'	360° 00'		

PFS LINE
CURVE No. 2

$\Delta = 23°18'40"$
$R = 500'$
$T = 103.14'$
$L = 203.43$
$d_1 = 3.4377$

50' chd. = 49.98 34

183+00	6°36'22"			
+80.78	5°30'17" ↙			
+75	5°10'25" ↙			
+50	3°44'29" ↙			
+25	2°18'32" ↙			
182+00	0°52'36" ↙			
181+84.20 = B.C.			183+88.13 - E.C.	11°39'20"
			+75	10°54'11"
180+31.62 E.C.	27°48'25"	332°11'35"	+50	9°28'15"
180+00	25°59'12"	334°00'48"	+25	8°02'19"

"D" Line	New				
				$\Delta = 84^\circ 42' 25''$	343 / 90 / 253
				$R = 280$	
				$L = 413^{96}$	
				$d_1 = 6.1388335$	
				$T = 255^{26}$	
7+25	21° 43' 13"	338° 16' 47"	4		
7+05 ℄ pipe	19° 40' 27"	340° 19' 33"			
7+00	19° 09' 45"	340° 50' 15"	4		
6+75	16° 36' 17"	343° 23' 43"	4	9+26^{67} EC, 42° 21' 12½"	317° 38' 47½" SET
6+50	14° 02' 48"	345° 57' 12"	4	9+00 39° 37' 31"	320° 22' 29" x
6+25	11° 29' 20"	348° 30' 40"	4	8+75 37° 04' 05"	322° 55' 55" x
6+00	8° 55' 52"	351° 04' 08"	4	8+50 34° 30' 34"	325° 29' 26" 4
5+75	6° 22' 23"	353° 27' 37"	4	8+25 31° 57' 06"	328° 02' 54" 4
5+50	3° 48' 55"	356° 11' 05"	4	8+00 29° 23' 38"	330° 36' 22" 4
5+34^{65} Lt. only P.C.C. Lt. CS Line	2° 14' 41"	357° 45' 19"	✓		
5+25 Rt only	1° 15' 27"	358° 44' 33"	4	7+75 26° 50' 09"	333° 09' 51" 4
5+12^{71} BC, = 2+60^{75} "C" Line	0° 00'	360° 00'		7+50 24° 16' 41"	335° 43' 19" 4

"D" Line

$\Delta = 36° 08' 25''$
$\frac{1}{2}\Delta = 18° 04' 12\frac{1}{2}''$
$R = 300$
$T = 97^{88}$

$L = 189^{23}$
$d_1 = 5.729578'$

3+08^{58} E.C.	18° 04' 12½"	
		(7^{95})
3+00	17° 15' 03"	
		(23^{165})
2+75	14° 51' 49"	
2+50	12° 28' 34"	
2+25	10° 05' 20"	
2+11^{30} Begin B.C., Lt "H" cb	8° 46' 50"	
2+00 tangent 62^{72}	7° 42' 05"	
1+75	5° 18' 51"	
1+50	2° 55' 37"	
1+25	0° 32' 22"	
5^{65}		(5^{23})
1+19^{35} B.C.	0° 00' 00"	

"C" Line New

Δ = 149° 23' 57"
R = 100 00
L = 260 75'

	deflection Ls	Δs
0+98.04	46° 36' 46"	93° 13' 32"
1+00		92° 06' 11"
1+23.04	39° 27' 03"	78° 54' 06"
1+25		77° 46' 45"
1+48.04	32° 17' 37"	64° 35' 14"
1+50		63° 27' 19"
1+73.04	25° 07' 37"	50° 15' 14"
1+75		49° 07' 52"
1+98.04	17° 57' 54"	35° 55' 48"
2+00		34° 48' 26"
2+23.04	10° 48' 11"	21° 36' 22"
19.62 2+25		20° 29' 00"
2+32.66 P.C.C. 2+C6 Line	8° 02' 50"	16° 05' 40"
2+48.04	3° 38' 28"	7° 16' 56"
12.71 2+50		6° 09' 34"
2+60.75 E.C.	0° 00' 00"	0° 00' 00"
5+12.71 "D" Line BC		

0+00	74° 41' 58½"	149° 23' 57"
0+18.27 P.C.C. L+6	69° 27' 56"	138° 55' 52"
0+19.87	69° 00' 25"	138° 00' 30"
0+25		135° 04' 30"
0+23.04	68° 05' 55"	136° 11' 50"
0+48.04	60° 56' 12"	121° 52' 24"
0+50		120° 45' 03"
0+68.04 E inlet	55° 12' 26"	111° 24' 52"
0+73.04	53° 46' 29"	107° 32' 58"
0+75		106° 25' 37"

CURVE ON "D" LINE

Δ = 23°24'00"
R = 1490'
T = 308.56
L = 608.53

D_1 = 1.153606

+75		3°26'32"	-225	7°22'28"
18 +65 90	20° Δ to 0+00 "A"	3°16'03"		
+50		2°57'42"	-250	6°53'36"
+25		2°28'52"	-275	6°24'45"
18~		2°00'00"	-300	5°55'55"
+75		1°31'11"	20~ = -304 49	5°50'45"
+50		1°02'20"	+75	5°21'54"
+25		0°33'30"	+50	4°53'04"
17~		0°04'40"	+25	4°24'13"
16+95 96 = B.C.		0°00'00"	19~	3°55'23"

23+04.49 "D"		
0+00 = E.C. Montezuma Rd		11°42'00"
-25		11°13'10"
-50		10°44'20"
-75		10°15'30"
-100		9°46'38"
-125		9°17'48"
-150		8°48'58"
-175		8°20'07"
-200		7°51'17"

"F" Line

$\Delta = 58°52'17"$
$\frac{1}{2}\Delta = 29°26'08\frac{1}{2}"$
$R = 125$
$T = 70\frac{54}{}$
$L = 128.44$

$d_1 = 13.750987$

"F"
$5+20\frac{47}{} = 11450$ Ald. Ne

4+48.17 E.C.	29° 26' 08½"	✓
4+37	27° 02' 05"	✓
4+35	26° 25' .04	✓
4+30	25° 16' 19"	✓
4+25	24° 07' 34"	✓
4+00	18° 23' 48"	✓
3+75	12° 40' 01"	✓
3+50	6° 56' 15"	✓
3+25	1° 12' 28"	✓
$3+19\frac{73}{}$ B.C.	0° 00'	

c = 23.13

c = 24.96

c = 5.27

$14\frac{69}{}$

$3+05\frac{04}{}$ E°
= S 0+00 "F-1"

"F-1" Line

$\Delta = 148\ 52'\ 17''$
$R = 85$
$T = 305.17$
$L = 220.86$

$d_1 = 20.22204$

	Δ	$\frac{1}{2}\Delta$
1+75	117° 57' 42"	58° 58' 51" ✓
1+50	101° 06' 36"	50° 33' 18" ✓
1+25	84° 15' 30"	42° 07' 45" ✓
1+05	70° 46' 38"	35° 23' 19" ✓ P.O.C.
C=5.00	3°8K of 8K E C=4.65	
1+00	67° 24' 24"	33° 42' 12" ✓
0+75	50° 33' 18"	25° 16' 39" ✓
0+50	33° 42' 12"	16° 51' 06" ✓
0+25	16° 51' 06"	8° 25' 33" ✓
C=23.44 (24.91)	3°8K of 8K E C=21.87 (23.15)	
0+00 "F-1" BC = S 3+05.04 "F"	0° 00'	0° 00'

17° to Ch island

18½ to Ch island

	Δ	$\frac{1}{2}\Delta$
12+70 Aldine 24°8K. = S		
2+20.86 E.C. "F-1"	148 52 17	74° 26' 08½" ✓
C=20.81	3°8K of 8K E C=19.34	
2+00	134 48 48	67° 24' 24" ✓
1+80		60° 19' 57" ✓

	Survey Line B.C.	Aldine @14+25.06 Survey		
			$\Delta = 55^\circ 24' 22''$ $R = 305'$ $L = 294.94'$	$d_1 = 5.63565$
16+25	18° 46' 48"	341° 13' 12"		
16+00 P.C.	16° 25' 54"	343° 34' 06"		
15+75	14° 05' 01"	345° 44' 59"		
15+50	11° 44' 07"	348° 15' 53"		
15+25	9° 23' 14"	350° 36' 46"	end job	
			17+20	27° 42' 11" 332° 17' 49"
15+00	7° 02' 20"	352° 57' 40"	C=20.00	
			17+00	25° 49' 28" 334° 10' 32"
14+75	4° 41' 27"	355° 08' 33"		
C=24.99			16+75	23° 28' 34" 336° 31' 26"
14+50	2° 20' 30"	357° 39' 30"		
C=24.93			16+50	21° 07' 41" 338° 52' 19"
14+25.06 Survey	0° 00'	360° 00'		
=14+25.29 Const Line				

Construction Line
Aldine
this Line is 14° offset @ 16+00 Survey Line

$\Delta = 30° 05' 40''$
$R = 318^{76}$
$L = 167^{43}$

$c = 165^{51}$ mea
$d_1 = 5.39237$

(sly ep $R = 303^{26}$)

$15+92^{72}$	15° 02' 50"	344° 57' 10"
$c = 17^{72}$		
15+75	13° 27' 18"	346° 32' 42"
15+50	11° 12' 29"	348° 47' 31"
15+25	8° 57' 40"	351° 02' 20"
15+00	6° 42' 52"	353° 17' 08"
14+75	4° 28' 03"	355° 31' 57"
$c = 24^{99}$		
14+50	2° 13' 15"	357° 46' 45"
$c = 24^{71}$		
$14+25^{29}$ BC	0° 00	360° 00'
$14+25^{06}$ Survey Line	11° sly of	