

**Key**

Given Centerline Curve Data:

$$\begin{aligned} \Delta &= 31^{\circ}10'12'' \\ R &= 500.00' \\ PC &= 21+31.34 \\ \text{ROW} &= 51.00' \qquad 25.50' \mid 25.50' \end{aligned}$$

Find:

Deflection angles and sub-chords to layout this curve on quarter stations.

$$\begin{aligned} (1) \quad \Delta &= 31^{\circ}10'12'' \\ (2) \quad R &= 500.00' \\ (3) \quad L &= \underline{272.01'} \\ (4) \quad C &= \underline{268.67'} \\ (5) \quad T &= \underline{139.46'} \\ (6) \quad M &= \underline{18.38'} \\ (7) \quad E &= \underline{19.09'} \\ (8) \quad D_A &= \underline{11^{\circ}27'33''} \\ (9) \quad D_C &= \underline{11^{\circ}28'42''} \\ (10) \quad df &= \underline{0.0573^{\circ}} \end{aligned}$$

STATION	$l$	$\alpha/2$	SC (CL)	200' tape	SC (inside)	200' tape	SC (outside)	200' tape
21+31.34	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
<b>21+50</b>	<b>18.66'</b>	<b>1°04'09"</b>	<b>18.66'</b>		<b>17.71'</b>		<b>19.61'</b>	
<b>21+75</b>	<b>43.66'</b>	<b>2°30'06"</b>	<b>43.65'</b>		<b>41.42'</b>		<b>45.87'</b>	
<b>22+00</b>	<b>68.66'</b>	<b>3°56'02"</b>	<b>68.61'</b>		<b>65.11'</b>		<b>72.11'</b>	
<b>22+25</b>	<b>93.66'</b>	<b>5°21'59"</b>	<b>93.52'</b>		<b>88.75'</b>		<b>98.29'</b>	
<b>22+50</b>	<b>118.66'</b>	<b>6°47'55"</b>	<b>118.38'</b>		<b>112.34'</b>		<b>124.42'</b>	
<b>22+67.34</b>	<b>136.00'</b>	<b>7°47'33"</b>	<b>135.58'</b>		<b>128.67'</b>		<b>142.50'</b>	
<b>22+75</b>	<b>143.66'</b>	<b>8°13'52"</b>	<b>143.17'</b>		<b>135.87'</b>		<b>150.47'</b>	
<b>23+00</b>	<b>168.66'</b>	<b>9°39'49"</b>	<b>167.86'</b>		<b>159.30'</b>		<b>176.42'</b>	<b>-0-</b>
<b>23+25</b>	<b>193.66'</b>	<b>11°05'45"</b>	<b>192.45'</b>	<b>-0-</b>	<b>182.64'</b>	<b>-0-</b>	<b>202.27'</b>	<b>26.27'</b>
<b>23+50</b>	<b>218.66'</b>	<b>12°31'42"</b>	<b>216.92'</b>	<b>25.00'</b>	<b>205.85'</b>	<b>23.72'</b>	<b>227.98'</b>	<b>52.53'</b>
<b>23+75</b>	<b>243.66'</b>	<b>13°57'38"</b>	<b>241.26'</b>	<b>49.98'</b>	<b>228.96'</b>	<b>47.43'</b>	<b>253.56'</b>	<b>78.75'</b>
<b>24+00</b>	<b>268.66'</b>	<b>15°23'35"</b>	<b>265.44'</b>	<b>74.93'</b>	<b>251.90'</b>	<b>71.11'</b>	<b>278.98'</b>	<b>104.92'</b>
<b>24+03.35</b>	<b>272.01'</b>	<b>15°35'06"</b>	<b>268.67'</b>	<b>78.27'</b>	<b>254.97'</b>	<b>74.28'</b>	<b>282.37'</b>	<b>108.43'</b>