

Horizontal Curve Alignment - File [Rd2]

Chainage Interval: 20.000 Alignment Position Option: Centre Line - No Offset Offset Distance: 0.000

Chainage Y Co-ordinate X Co-ordinate

Start Point : 4100.000 15618.370 23847.296

End Point : Undeclared 13545.065 25599.290

Horizontal Curve Data

Curve	Point Name	Point of Intersection Y Co-ordinate	X Co-ordinate	Circular Radius	Transition Curve Length In	Length Out
Previous	C1	14832.906	23999.106	800.000	100.000	
Current	C2	14411.039	24557.701	800.000		100.000
Next	C3	13766.395	24830.525	500.000	40.000	40.000

Buttons: Add Curve, Insert Curve, Delete Curve, Calculate Offset Beacon, Exit, First Curve, Last Curve, Compute/View

Horizontal Alignment File [Rd2]

CURVE DATA FOR CURVE [C2]

CURVE CENTRE : Y = 13932.460
 CURVE CENTRE : X = 23933.679
 CIRCULAR RADIUS : 800.000
 CIRCULAR ARC LENGTH : 358.879
 TANGENT LENGTH IN : 215.401
 TANGENT LENGTH OUT : 253.451
 INTERSECTION ANGLE : -30:00:00
 DIR OF STRAIGHT IN : 822:56:20
 DIR OF STRAIGHT OUT : 292:56:20
 TRANS. LENGTH IN :
 TRANS. LENGTH OUT : 100.000

POINT	CHAINAGE	Y	X
CHG	5840.000	14155.099	24686.019
CHG	5860.000	14136.680	24673.814
CHG	5880.000	14118.262	24661.609
CHG	5900.000	14099.843	24649.404
CHG	5920.000	14081.425	24637.199
CHG	5940.000	14053.007	24704.994
CHG	5960.000	14044.588	24712.789
CHG	5980.000	14026.170	24720.584

Buttons: Home, End, Return to Calculations, Printer, Clipboard, ASCII File

A Horizontal Alignment (or Centre Line) file showing information for a Curve



Horizontal Curve and Straight Alignment

- Given a set of user defined parameters for a road or railway route containing a series of horizontal curves, this application will compute the [Y, X] (or [E, N]) co-ordinates and Chainages of positions along the centre line of a route, or along a defined Offset Line.
- The required input parameters are :-
 - The [Y, X] (or [E, N]) co-ordinates for the Start and End points of the section of the route to be computed, plus the chainage of the Start point. These Start and End points represent the total length of the centre line, or offset line, to be computed.
 - The [Y, X] (or [E, N]) co-ordinates for the Points of Intersection for all curves lying along the defined route (up to 100 curves).
 - The circular Radii for all curves lying along the route.

- The lengths of all Transition curves, if any, for all the curves along the route.
- The Chainage Interval required between Centre Line points.
- Selection of Centre line or Offset calculations.
- The route section can also be as long, or as short, as required. It may consist of a single curve (where the start and end values may be coincident with the BC and EC points), or a single straight. The maximum number of points on any Centre Line file is unlimited.
- Once a route, or section of a route, has been computed, this application may be used at a later date, for the editing of any of the curve parameters, if required. Curves may be Added, Inserted, Modified or Deleted from the original scheme. Any number of updates may be made and the Centre Line co-ordinates re-computed and re-stored.
- As the Centre line values (Co-ordinates and Chainages) are computed they are stored on a user defined Horizontal Alignment File. Simultaneously, the centre line point values are displayed on the SURPAC printer emulation screen. From this screen, the output may be sent to the current Printer, to an ASCII file, or to the Clipboard.
- Setting out data for Centre Line points may be computed and printed via the Setting Out Data Sheets.
- The user may select to determine centre line values, or offset values on either side of the centre line. Offset lines are useful when curvilinear boundaries are required along an existing, or proposed road/rail route.
- Computed Points may be :-
 - Converted to a User defined SURPAC Co-ordinate File,
 - Plotted on a User defined SURPAC CAD Plot Sheet,
 - Combined with SURPAC Vertical Curve Data for determining Section profiles,
 - Used to generate Centre Line Setting Out Field Sheets.