BEARING  Compass Bearing

Roadside: C/R/L  Feature Type: Length  Interlocking: Yes

Definition/Background: Represents a directional line segment of the roadway showing the degree of curvature of the roadway and bearing changes effected by curves in the roadway and/or horizontal shifts in the roadway.

Responsible Party for Data Collection: District Planning

Required For: All functionally classified roadways on the SHS

Who/What uses this Information: Safety, Central Planning, District Planning

How to Gather this Data: In office – Refer to construction plans or survey field book.

Enter N or S, the degrees/minutes/seconds, and the direction of deviation. Determine the angle deviation from north or south and the direction of the deviation.

Code using the described format. For example, a roadway heading 29 degrees in an eastward direction from north would have a deviation description of “N 29° E,” and a roadway 35 degrees from south in a westward direction would be “S 35° W.”

Value for Compass Bearing: 11 Bytes: XXXDXX’00”X – Record curve degrees/minutes/seconds

Enter using the following format:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>4</th>
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</tbody>
</table>

Below are descriptions for the byte positions:
1   N (north) or S (south)
2, 3 the number of degrees the roadway turns
4   D for degrees
5, 6 minutes of the curve
7   single quote (’) for minutes
8, 9 seconds of the curve
10  double quote (”) for seconds
11  direction in which the curve is traveling: E (east) or W (west)
**HRZCANGL**  
**Horizontal Curve Central Angle**

**Roadside:** C/R/L  
**Feature Type:** Length  
**Interlocking:** Yes

**Definition/Background:** Denotes the roadway segment's central curve angle. Also commonly referred to as the delta ($\Delta$).

**PI** – Point of Intersection. The point where the back and forward tangents intersect.

**Central Angle** – Angle formed by two radii drawn from the center of the circle to the PC and PT. Also referred to as the delta ($\Delta$).

**Responsible Party for Data Collection:** District Planning

**Required For:** All functionally classified roadways on the SHS

**Who/What uses this Information:** Safety, Central Planning, District Planning

**How to Gather this Data:** In office – Refer to construction plans or survey field book. Enter degrees/minutes/seconds. Refer to coding box.

Offset direction: 1-right and left, 2-right, 3-left

**Value for Horizontal Curve Central Angle:** 13 Bytes: XXXDX’XX.00” – Record angle according to degrees/minutes/seconds /hundredths of a second

Enter using the following format:

<table>
<thead>
<tr>
<th>1</th>
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</tbody>
</table>

Below are descriptions for the byte positions:

1-3 will be the number of degrees of the angle (zero fill degrees; e.g., 005 for 5 degrees)
4 will always be D for degrees
5, 6 will be the minutes of the curve
7 will always be a single quote (’) for minutes
8, 9 will be the seconds of the curve
10-12 will always be .00 (optional – may be removed)
13 will always be a double quote (") for seconds

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**CURVE DATA**

| PI STA   | 406+00.58 |
| DELTA    | 18° 02' 46" (RT) |
| D        | 1° 30' 00" |
| T        | 606.56' |
| L        | 1,203.07' |
| R        | 3,819.72' |
| PC STA   | 399+94.03 |
| PT STA   | 411+97.10 |

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**Horizontal Curve - Feature 221**

**Definition/Background:** Denotes the degree of curvature per 100 feet. Sometimes referred to as the D value of the curve.

The horizontal degree of curve is used to calculate the CURCLASx \(x = A - F\) in Feature 118 (HPMS).

The degree of curvature is measured by the angle subtended at the center by an arc 100 feet long.

Small D values represent flat curves with large radii, and large D values represent sharp curves with small radii. In general, D values larger than 20° are rare.

**Responsible Party for Data Collection:** District Planning

**Required For:** All functionally classified roadways on the SHS

**Who/What uses this Information:** Safety, Central Planning, District Planning

**How to Gather this Data:** In office – Refer to construction plans or survey field book.

Offset direction: 1-right and left, 2-right, 3-left

Enter degrees/minutes. Refer to coding box. The horizontal degree of curve should be coded for both sides of the roadway for all divided roadways that have different alignments.

**Value for Horizontal Degree of Curve:** 7 Bytes: XXXDXX’ – Record degrees/minutes

Enter using the following format:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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</tr>
</tbody>
</table>

Format

Below are descriptions for the byte positions:

1-3 will be the number of degrees the roadway turns
4 will always be D for degrees
5, 6 will be the minutes of the curve
7 will always be a single quote (’) for minutes

**CURVE DATA**

<table>
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<th>PI STA</th>
<th>DELTA</th>
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<th>T</th>
<th>L</th>
<th>R</th>
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<td>3,819.72</td>
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</tr>
</tbody>
</table>
**Horizontal Point of Intersection**

**Roadside:** C/R/L  
**Feature Type:** Length  
**Interlocking:** Yes

**Definition/Background:** Milepoint number for the intersection of the back and forward tangents projected onto the roadway.

**PC** – Point of Curvature. The point on the back tangent where the curve begins.

**PI** – Point of Intersection. The point where the back and forward tangents intersect.

**PT** – Point of Tangency. The point on the forward tangent where the curve ends.

**NOTE:** Record the milepoint of the PC as the BMP and the milepoint of the PT as the EMP of Feature 221.

**Responsible Party for Data Collection:** District Planning

**Required For:** All functionally classified roadways on the SHS

**Who/What uses this Information:** Safety, Central Planning, District Planning

**How to Gather this Data:** In office – Refer to construction plans or survey field book. Enter in milepoint number for the intersection of the point of curve.

**Value for Horizontal Point of Intersection:** 6 Bytes: XXX.XXX – Record milepoint of the PI

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**CURVE DATA**

<table>
<thead>
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<th>Parameter</th>
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<tr>
<td>PI STA</td>
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