

**Summary of Quantities for Widening at Curves**

| <b>S No.</b> | <b>Description</b>              | <b>Unit</b> | <b>Quantity</b> |
|--------------|---------------------------------|-------------|-----------------|
| 1            | Delineators                     | Nr.         | <b>260</b>      |
| 2            | Road Studs                      | Nr.         | <b>1030</b>     |
| 3            | Metal beam Crash Barrier        | Lin.m.      |                 |
| 4            | BC                              | cum         | <b>60</b>       |
| 5            | Aggregate layer                 | cum         | <b>120</b>      |
| 6            | Tack coat on bituminous surface | sqm         |                 |
| 7            | Tack coat on Granular surface   | sqm         | <b>1120</b>     |
| 8            | Prime coat                      | sqm         | <b>1120</b>     |
| 9            | CTB                             | cum         | <b>130</b>      |
| 10           | CTSB                            | cum         | <b>270</b>      |
| 11           | SG                              | cum         | <b>560</b>      |

## Quantities for Widening at Curves

| S. No | Chainage | Radius | Spiral Length (m) | Circular Length (m) | Delineator s Spacing as per IRC 79 | No of Delineator | No. of Road Studs @ 5m c/c | BC           | Aggregate layer | Tack Coat on Granular | Prime coat     | CTB           | CTSB          | SG            |
|-------|----------|--------|-------------------|---------------------|------------------------------------|------------------|----------------------------|--------------|-----------------|-----------------------|----------------|---------------|---------------|---------------|
| 1     | 9+861    | 500    |                   | 256.1               | 35                                 | 17               | 102                        | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 2     | 10+273   | 200    | 20                | 55.9                | 25                                 | 9                | 30                         | 4.0          | 7.9             | 79.1                  | 79.1           | 9.1           | 18.6          | 39.5          |
| 3     | 10+547   | 200    | 20                | 142.9               | 25                                 | 15               | 66                         | 9.2          | 18.4            | 183.5                 | 183.5          | 21.1          | 43.1          | 91.8          |
| 4     | 10+820   | 500    |                   | 172.5               | 35                                 | 13               | 68                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 5     | 11+123   | 400    | 15                | 141.7               | 30                                 | 13               | 62                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 6     | 11+472   | 200    | 20                | 83.2                | 25                                 | 11               | 42                         | 5.6          | 11.2            | 111.8                 | 111.8          | 12.9          | 26.3          | 55.9          |
| 7     | 11+761   | 400    | 15                | 99.4                | 30                                 | 11               | 46                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 8     | 12+260   | 1000   |                   | 44.4                | 50                                 | 7                | 0                          | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 9     | 13+083   | 500    |                   | 329.8               | 35                                 | 20               | 132                        | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 10    | 13+734   | 300    | 75                | 114.5               | 25                                 | 13               | 76                         | 9.1          | 18.2            | 182.4                 | 182.4          | 21.0          | 42.9          | 91.2          |
| 11    | 14+246   | 200    | 30                | 78.6                | 25                                 | 11               | 44                         | 5.6          | 11.2            | 112.3                 | 112.3          | 12.9          | 26.4          | 56.1          |
| 12    | 14+509   | 1000   |                   | 360.4               | 50                                 | 17               | 0                          | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 13    | 14+843   | 500    |                   | 97.9                | 35                                 | 10               | 40                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 14    | 15+112   | 200    | 20                | 21.7                | 25                                 | 7                | 16                         | 1.9          | 3.8             | 38.1                  | 38.1           | 4.4           | 8.9           | 19.0          |
| 15    | 15+585   | 1000   |                   | 114.3               | 50                                 | 9                | 0                          | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 16    | 16+020   | 500    |                   | 113.0               | 35                                 | 11               | 46                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 17    | 16+509   | 500    |                   | 22.7                | 35                                 | 7                | 10                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 18    | 16+763   | 500    |                   | 135.4               | 35                                 | 12               | 54                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 19    | 17+027   | 150    | 30                | 187.4               | 25                                 | 17               | 86                         | 12.1         | 24.3            | 242.8                 | 242.8          | 27.9          | 57.1          | 121.4         |
| 20    | 17+382   | 500    |                   | 140.5               | 35                                 | 12               | 56                         | 0.0          | 0.0             | 0.0                   | 0.0            | 0.0           | 0.0           | 0.0           |
| 21    | 17+697   | 100    | 45                | 68.6                | 25                                 | 10               | 46                         | 8.2          | 16.4            | 163.9                 | 163.9          | 18.9          | 38.5          | 82.0          |
|       |          |        |                   | <b>2780.83</b>      |                                    | <b>252.00</b>    | <b>1022.00</b>             | <b>55.70</b> | <b>111.39</b>   | <b>1113.90</b>        | <b>1113.90</b> | <b>128.10</b> | <b>261.77</b> | <b>556.95</b> |
|       |          |        |                   |                     | Say                                | <b>260</b>       | <b>1030</b>                | <b>60</b>    | <b>120</b>      | <b>1120</b>           | <b>1120</b>    | <b>130</b>    | <b>270</b>    | <b>560</b>    |