

3.2 IRC: 86 – 2018 Clause 9.2: Gradients

The gradient of 4% should be considered as maximum for urban roads as per the above clause. The locations where the gradient has gone steeper than the maximum are shown below –

| Sr. No. | Start Chainage | End Chainage | Length (m) | Gradient | Type | Remarks |
|---------|----------------|--------------|------------|----------|-----------------|--------------------------------------|
| 1 | 0+080 | 0+220 | 140 | 5.00% | Solid UP Ramp | After Mahatma Phule Junction |
| 2 | 2+150 | 2+350 | 200 | 4.00 % | Solid Down Ramp | After Kopari Junction |
| 2 | A-0+260 | A-0+430 | 170 | 5.00% | Solid Down Ramp | Arenja Corner to towards Turbhe Road |

IRC: 84 – 2019 Clause 2.9.4: Radius of Horizontal Curve Desirable Minimum is 400m and Absolute Minimum is 250m

The locations where the Radius has gone more than the maximum are shown below -

| Sr. No. | Curve At Chainage | Radius | Type | Remark |
|---------|-------------------|--------|-----------|------------------------------|
| 1 | 42.820 | 100 | Down Ramp | Arenja Corner to Turbhe Road |
| 2 | 86.279 | 100 | Down Ramp | |
| 3 | 140.562 | 200 | Down Ramp | |
| 4 | 173.584 | 100 | Down Ramp | |
| 5 | 225.000 | 30 | Down Ramp | |

The Speed of 80 Km/Hr should be considered for urban roads as per the above clause. The locations where the Speed has gone lesser than the minimum are shown below -

| Sr. No. | Start Chainage | End Chainage | Length (m) | Speed | Type | Remarks |
|---------|----------------|--------------|------------|----------|------------------------|--|
| 1 | 0+080 | 0+250 | 170 | 50 Km/Hr | Solid UP Ramp | Mahatma Phule Chowk to Kopri Bridge Junction |
| 2 | 0+650 | 0+960 | 310 | 60 Km/Hr | Viaduct Portion | |
| 4 | 2+270 | 2+360 | 90 | 40 Km/Hr | Solid Ramp End Portion | |
| 5 | A - 0+000 | A - 0+180 | 180 | 20 | Down | Arenja Corner |

| Sr. No. | Start Chainage | End Chainage | Length (m) | Speed | Type | Remarks |
|----------------|-----------------------|---------------------|-------------------|--------------|-----------------|------------------------|
| | | | | Km/Hr | Ramp | to towards Turbhe Road |
| 6 | A - 0+180 | A - 0+260 | 80 | 15 Km/Hr | Down Ramp | |
| 7 | A - 0+260 | A - 0+430 | 170 | 15 Km/Hr | Solid Down Ramp | |

The central median width is 0.6m for entire proposed flyover. Below the flyover on Palm Beach road, it shall be 5m and will be flushed by anti-crash barrier in concrete with 2m high decorative grills so as to prevent access and also enhancing the urban scape. The grill shall be metallic and painted with 2 coats of epoxy and must be of approved quality and make.