

3. Design Standards for Road

The proposed design standards for the project road are based on provisions of following standard documents.

- Nepal Road Design Standards (NRS) 2027 (First Revision-2045).
- Asian Highway design standards (AHDS) 1993
- Indian Roads Congress (IRC)

Adopted design standard are shown in table below:

i.	Design Speed Km/hr	:	100
ii.	Level of Service	:	B
iii.	Roadway Width	:	In urban case: 50m

			In semi urban case: 33m In non-urban case:24m
iv.	Roadway Elements	:	In urban case: Carriageway 4-lane-2x7.5m Paved Shoulder- 2x2.50m (with Rumble Strip as required) Central Median - 3.00m, Service lane-2x6.5m with 1.50 m Side Median and Foot Path-2x5.5m. In semi urban case: Carriageway 4-lane- 2x7.5m Paved Shoulder- 2x2.50m (with Rumble Strip as required) Central Median- 3.00m Additional Lane–2x3.50 m additional lane (upgradable to 6.50m) with 1.50 m lane separator In non-urban case: Carriageway 4-lane- 2x7.5m Paved Shoulder- 2x2.50m (with Rumble Strip as required) Central Median - 3.00m. Verge-2 x 0.5m
v	Camber	:	Carriageway: 2% Shoulder: 3%
vi	Right of Way	:	50.00 m
vii	General Embankment/ Cutting Slope	:	In Filling: 1V:1.50H In Cutting: 2V: 1H (varies as per soil type)
viii	Stopping Sight Distance	:	190m-design speed of 100km/hr
ix	Super-elevation	:	7%
x	Min. Radii for Horizontal Curves	:	Plain / Level Terrain - 375 m (100km/hr)
xi	Ruling Gradient	:	5-6% Minimum Gradient 0.50 %
xii	Minimum K-Factor	:	
	Summit Curve	:	85 for Design speed of 100 km/hr (Only considering Stopping Sight Distance)
	Valley Curve	:	45 for Design speed of 100 km/hr (Only considering Stopping Sight Distance)
xiii	Bridge Clearance	:	
	Vehicular underpass	:	4.75 m
	Interchanges / Grade Separator	:	5.50m
	Cattle / Community Crossing underpass	:	3.50 m
	Wildlife	:	4.50 m
	Minimum Drainage Channel Width	:	0.40