

PROJECT-4

HIGHWAY CRASH BARRIER/GUARDRAIL

1. Raw Material & Standards

A. Main Components & Materials

S.NO	COMPONENTS	MATERIAL	STANDARD
1.	Guardrail Beam	Hot-rolled steel	<i>IS 5986/ IS 10748/ ASTM A1011</i>
2.	Posts (C/RSJ/Tube	Hot-rolled steel	<i>IS 2062/ SDTM S36/ EN 10025</i>
3.	Fasteners	Carbon steel/ alloy steel	<i>IS 1363/1367 / ISO 898-1</i>

2. Material specifications- Beam, Posts, Blocks

S.NO.	STANDARD	GRADE	USE
1.	<i>IS 2026</i>	E250/E350	Posts, Spacers
2.	<i>IS 5986</i>	Fe 360/Fe 410	W-beam/Thrie-beam
3.	<i>ASTM A36</i>	-	General structure
4.	<i>ASTM A1011</i>	Grade 50	Guardrails (USA std.)
5.			

3. Galvanizing specifications (Corrosion Protection)

- Coating method: Hot-dip galvanizing
- Applicable Standards:
IS 2629, IS 4759, ASTM A123 / A153, EN ISO 1461
- Zinc Coating thickness: Verified via coating mass test (triple-spot, single-spot)

4. Testing & Quality Control

S.NO	TEST	Standard/Method
1.	Tensile Test	<i>IS 1608/ ASTM E8</i>
2.	Yield strength & Elongation	<i>Mill test certificate (MTC)</i>
3.	Zinc Coating thickness	<i>IS 3203/ASTM A123</i>
4.	Bend test	<i>IS 1599</i>