

DETAILED PROJECT REPORT (DPR)

Project Title: Construction of Two-Lane Bituminous Road from Tiruchengode to Rasipuram, Namakkal District, Tamil Nadu

Executing Agency: Tamil Nadu Highways Department

Total Project Cost: ₹22.48 Crores

Length of Road: 12.5 km

1. Executive Summary

The project involves the construction of a 12.5 km two-lane bituminous road connecting Tiruchengode to Rasipuram in Namakkal District, Tamil Nadu. This road serves as a vital link between the industrial and agricultural zones of the district, enhancing connectivity to NH-44. The proposed project aims to improve transportation efficiency, safety, and economic growth in the region. The design conforms to IRC:37-2018 and MORTH specifications.

2. Project Background & Objectives

The existing village road is narrow and damaged, leading to frequent traffic congestion. The upgradation to a two-lane bituminous pavement is essential to handle increased vehicular movement from nearby industrial estates and educational institutions. The objectives are to improve ride quality, reduce travel time, and ensure all-weather connectivity.

3. Design Standards

Design Speed	80 km/h (Plain Terrain)
Carriageway Width	7.0 m
Paved Shoulder	1.5 m on each side
Right of Way	20 m
Pavement Type	Flexible Bituminous Pavement
Design Life	15 years
CBR (Design)	8%

4. Pavement Design & Composition

Based on soil test results and design traffic of 2 msa (million standard axles), the following pavement composition is proposed:

Layer	Material	Thickness (mm)
Surface Course	Bituminous Concrete (BC)	40
Binder Course	Dense Bituminous Macadam (DBM)	90

Base Course	Wet Mix Macadam (WMM)	250
Sub-base	Granular Sub-base (GSB)	200

5. Drainage, Culverts & Structures

The project includes 3 minor bridges and 12 pipe culverts to ensure smooth water discharge during monsoon. Side drains are provided throughout the stretch with RCC rectangular sections in urban zones and earthen drains in rural segments.

6. Cost Estimate

The total estimated cost of ₹22.48 Crores includes civil works, contingencies, and supervision charges. The cost breakup is as follows:

Component	Estimated Cost (₹ Lakhs)
Road Work (Earthwork, WMM, Bituminous Layers)	1450
Drainage & Structures	380
Traffic Safety & Signage	60
Utility Shifting & Land	120
Contingency & Supervision	238
Total	2248

7. Implementation Plan

The project is proposed to be completed within 18 months from the date of commencement. The work will be executed in three phases: Phase I – Earthwork and Drainage (6 months), Phase II – Pavement Construction (8 months), Phase III – Finishing, Markings, and Safety (4 months).

8. Environmental & Social Impact

No significant environmental impacts are anticipated as the alignment follows existing RoW. Dust suppression, noise barriers, and tree plantation (1,000 saplings) are proposed. No land acquisition involving habitation displacement is required.

9. Conclusion & Recommendations

The project is technically sound and economically viable. The construction of this two-lane bituminous road will enhance regional connectivity, reduce travel time by 30%, and promote socio-economic development in Namakkal District. It is recommended for approval under the State Road Development Scheme (SRDS).