



Project Background

General

National Highways Authority of India (NHAI) has taken up 2-laning with paved shoulders configuration with provision of capacity augmentation for National Highways for 4 packages in Bihar, West Bengal, Uttar Pradesh and Orissa under NHDP. In this regard, RITES has been entrusted with Consultancy services for preparation of Detailed Project Report for Unnao – Lalganj Section of NH-232A (New NH-31).

The objective is to upgrade the above highway sections 2-lane carriageway to 4 lane with paved shoulder configuration and necessary improvement. This part of the report covers “Construction of four lane road for Unnao-Lalganj section of NH-232A (New NH 31) from Km -1/000 to 70/000 (70 Km) in the state of Uttar Pradesh”

Further, NHAI directed to revise design standards and Cost as per IRC: SP: 84-2014 Manual of specifications for four lane highway with paved shoulder.

This Report pertains Unnao to Lalganj from Km -1/000 to 70/000 (70 Km) including Achalganj, Bethar, Bihar, Nihashatha and Lalganj bypasses)



Fig – 0.1 Key Map of the Project Road

Project Road Description

General

The start of the project road is from a T-junction with NH-25 at km 63.750 (Kanpur – Lucknow) at km -1+000 (Design chainage) at Unnao Town. The Unnao town is situated near the Industrial Satellite city Kanpur in the South and Lucknow, the capital of Uttar Pradesh in the North.

The project preparations were done for 70.000 km (including bypass) i.e from Km -1/000 to 70/000 .



Development of Unnao-Lalganj Section of NH-232A on EPC mode in the State of UP

The road section passes through built-up areas of villages Gadan Khera, Lohcha, Achalganj, Bather, Pachodda, Sikandarpur Karn, Lalkuan, Bighapur, Patan Takiya, Bihar, Simari and ends at Lalganj Town. The project road is generally passing through plain terrain. In all there are 42 numbers built-up stretches along the project road.

Abutting Land Use

The land use along open areas is generally agricultural, mango gardens and in addition social forestry on road ROW land. The barren land exists from km 47.000 to km 50.000.

Existing Road

The existing road geometry is poor and contains numbers of sharp curves. The vertical geometrics is generally poor. The geometrics of the existing road needing attention are being considered for relevant improvement.

The type and extent of surface distress were evaluated using the detailed visual inspection (DVI) method. A calibrated vehicle mounted bump integrator (VMBI) was used for the determination of pavement roughness along the entire road section. The existing shoulder of project road section is earthen shoulder on both sides of the road.

Earthen shoulder exist on both sides from km 0.450 to km 5.000 of the project road with very poor to poor condition and from km 52.000 to km 65.200 of the project road with poor condition except some of isolated stretches. Rest of road section shoulder have been occupied by grass and bushes. Rutting of shoulder can be observed throughout the road and rut depth varies from 50 mm to 132 mm.

Cracking, pot holes, ravelling and patching can be found almost throughout the road section. The location of the project road is shown

NEED OF THE PROJECT

To keep pace with the forth coming economic development within the State demands the development of the project road. However, there are other conditions which have led to the demand of the project.

The start of the project road is from a T-junction with NH-25 (Kanpur – Lucknow) at km 0+450 (Existing chainage) at Unnao Town. The Unnao town is situated near the Industrial Satellite city Kanpur in the South and Lucknow, the capital of Uttar Pradesh in the North.

The project preparations were done for 70.000 km (including bypass) i.e from km -1+000 to km 70+000 (Design chainage).

This project road will lead to economic development of rural areas of Uttar Pradesh by way of their faster linkages to the vast consumer markets.

Bridges and Cross Drainages

There are total six minor bridges on the project road and only one major bridge on river Lone at km 44+061. The major bridge is 2 lane wide and newly constructed.



Development of Unnao-Lalganj Section of NH-232A on EPC mode in the State of UP

Minor Bridges

The project road section crosses one river, many channels and streams. There are six existing minor bridges and their condition is generally poor.

Road Junctions

There are 77 Nos. of cross roads (NH, SH, MDR, ODRS and Village Roads) joining on the project road. Amongst these, three major junctions on the project road are with National Highways, State Highways and ODR and balance all are minor junctions.

PROPOSED ROAD FEATURES

- The proposed right of way is 34-60 meters and about 184.34 ha. of land is to be acquired for the widening of Unnao-Lalganj section NH- 232A(New-NH 31) in the state of Uttar Pradesh.
- 4-lane divided carriage way is proposed
- Structure of 4-lane carriageway configuration is proposed.
- Major Bridge : 1 no.
- Minor Bridges : 7 nos.
- Culverts : 131 nos.
- Vehicular Underpasses(Grade-1) : 4 nos.
- Vehicular Underpasses(Grade-2) : 12 nos.
- Number of Interchanges : 13 nos.
- Number of Flyovers : 2 nos.
- Railway Over Bridge : Nil
- Number of Toll Plaza : 1 nos.
- Wayside Amenities : 2 nos
- Service Roads : 5.5 meter to 7 meter wide
- Rainwater Harvesting : 23 nos.

COST ESTIMATE

The total cost of the project cost is INR 1417 Cr.


 Project Director
 National Highway Authority of India
 P.J.U., Kanpur

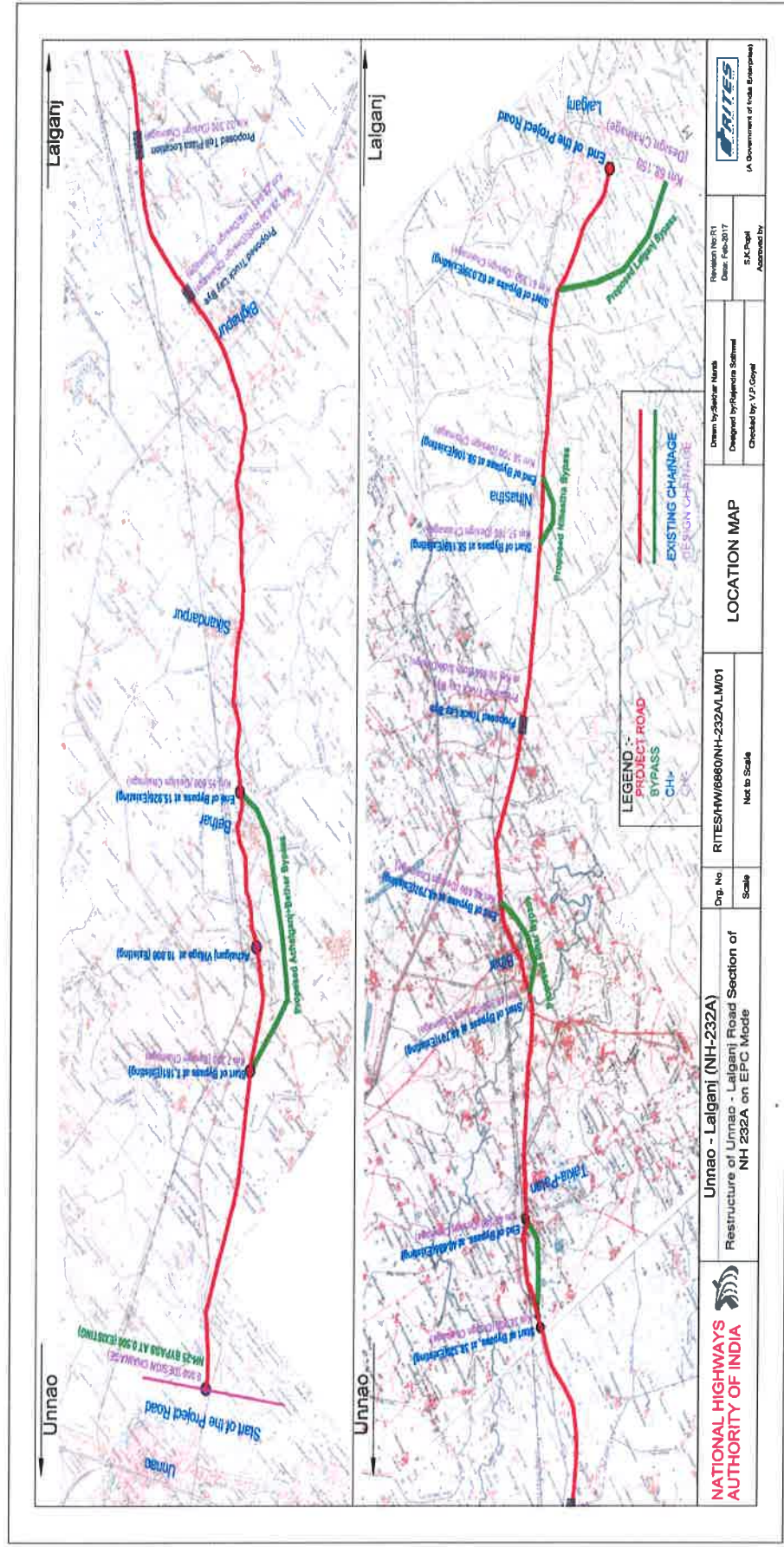


Figure 1.1: Location of Project Road

Description of Project

Rites


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