

**PROJECT NAME:** Four laning of Tumkur - Shimoga Section of NH-206 from Km. 0+000 to Km. 217+000 in the state of Karnataka under NHDP Phase IV on DBFOT Basis.

**PROPOSAL:** For diversion of **2.4761 Ha** of forest land falling under Hassan Forest Divisions which is being diverted for widening of existing National Highway to four lane - **Package II (from Km 66+540 to Km. 119+790) of NH 206.**

### **JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST AREA**

#### **1. BACKGROUND:**

In view of National Highways Interconnectivity Improvement Project strategy the MoRTH had selected 33 National Highways to upgrade from single lane / intermediate lane National Highways to at least 4 lane / 2 lane with paved shoulder standards. Out of these, some National Highways were proposed to be taken up through the assistance from World Bank. Although, this project stretch was initially under scope of World Bank fund, got transferred back to MoRTH – NHDP – IV due to segregation of 4-lane and 2-lane with paved shoulder development project. Thereafter the project stretch had been proposed and implemented on DBFOT (Hybrid Annuity) PPP mode under MoRTH-Delhi through ownership of NH-PWD (Karnataka). In July 2016 the project has again been transferred from MoRTH-Delhi to National Highways Authority of India (NHAI), Delhi because of policy matter and eventually Scope of services had been defined for an up-gradation on including strengthening and widening to 4-lane/2- lane / 2- lane with paved shoulder standards to facilitate the corridors in accordance with Highway geometrics, Safety measures, Social and Environmental perspective.

#### **2. INTRODUCTION:**

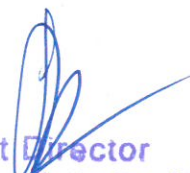
The Project Road NH 206 was previously the part of state highway 68, which was subsequently upgraded to National Highway No 206. NH 206 extends from Tumkur (km 0+00) to Honnavara (km 370+00) has a total length 370 km. From implementation point of view NH 206 has been divided into two sections. Section I starts from Tumkur and ends at Shimoga and Section II starts from Shimoga to Honnavara. Section I of the project road is being widened for four lanes as per the traffic projections.

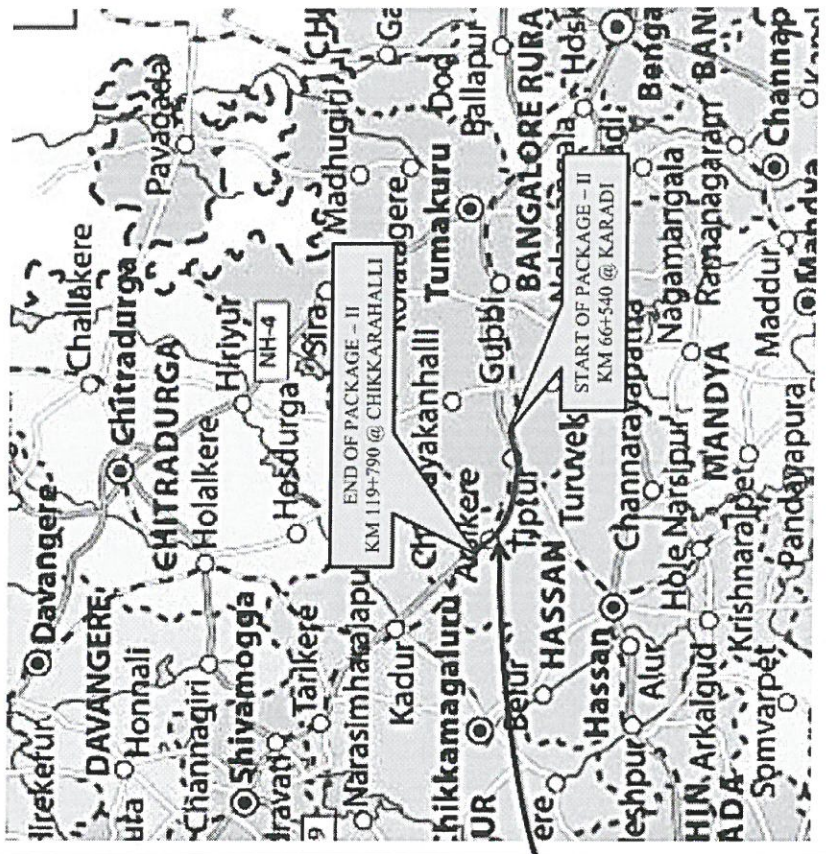
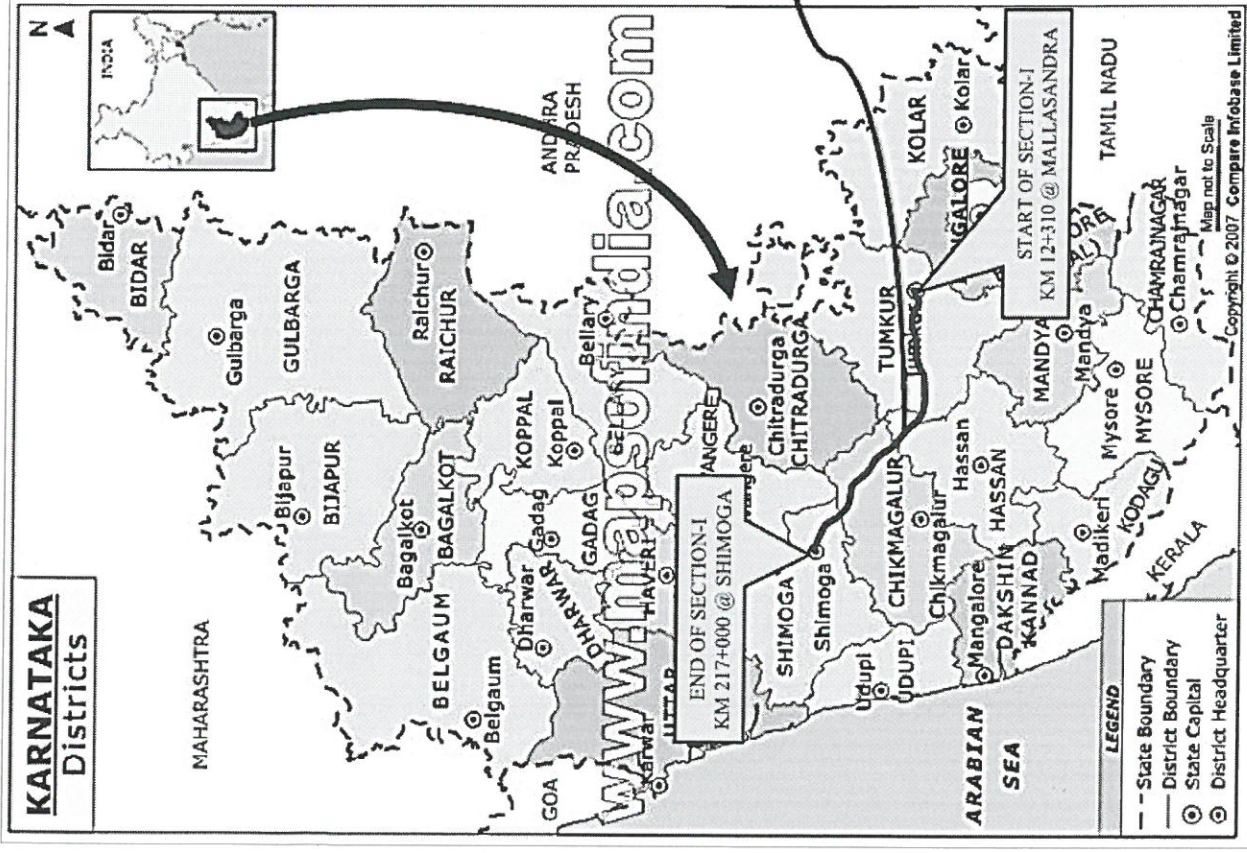
#### **3. LOCATION OF THE PROJECT ROAD:**

Section I alignment pass through 4 districts i.e. Tumkur, Hassan, Chikmagalur and Shimoga. Location map and summarised existing features are shown below figure and Table. Section I from Tumkur (km 0+00) to Shimoga town (km 216+500) is further split in to 4 contract packages as under.

1. Package I: (Km 12+310- to Km 66+540) – Mallasandra Village to Karadi Village
2. **Package II: (Km 66+540 to Km 119+790) – Karadi Village to Chikkarehalli Village**
3. Package III: (Km 119+790 to Km 166+100) – Chikkarehalli Village to Hosur Village
4. Package IV: (Km 166+100 to Km 217+000) – Hosur Village to Shimoga

The **location map** indicating the Section I of project road is presented in Figure below.

  
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Map not to Scale

#### 4. EXITING FEATURES OF PROJECT ROAD:

The existing National Highway 206 is of two lanes with or without paved shoulder varying from 5.0 to 7.5 m carriageway. Over the recent years, there has been an increase in traffic volume along the existing highway. Hence the highway needs to be widened to 4 lanes accommodating the increased traffic volume.

SL. No.	Particulars	Project Features	Remarks
1	Start Km	Existing: Km 66+540	Mailanahalli Cross Road
		Design: Km 65+195	
2	End Km	Existing: 119+790	Kururahalli Cross Road
		Design: Km 121+900	
3	Total Length (km)	Existing: 53.250	(km 66+540 to km 119+790)
		Proposed: 56.705	(km 65+195 to km 121+900)
4	Districts	2 nos.	Tumkur and Hassan
5	Terrain	Plain and Rolling	
6	Right of Way (RoW)	Existing: 21 to 45 m	There are some sections having 40-45m ROW where 4-Lane development is already done
		Proposed: 60 m	
7	Carriage way	2 lanes without paved shoulders,	30.300 km
		2 lane with paved shoulders and	18.990 km
		4 lane divided carriageway	07.440 km at Tiptur, Arasikere & Banavara
8	Major Bridge	Nil	
9	Minor Bridge	14 Nos.	
10	Vehicular Overpass	Nil	
11	ROB	2 nos.	At km 81+850 and km 101+845
12	Railway Level Crossings	Nil	
13	Culverts	67 Nos.	
14	Major Junctions	5 Nos.	
15	Minor Junction	43 nos.	
16	Hairpin Curves	Nil	
18	Agriculture lands	31.711 Km	59.58 %
19	Industrial / commercial areas	5 km	9.38 %
20	Built up Areas	15.389 Km	28.89 %
21	Forest stretch	1.150 Km (both LHS & RHS)	2.15 %
22	Villages/Towns	9/4	

  
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## 5. IMPROVEMENT PROPOSALS AND DESIGN

Study mandates the improvement of the project road to 4-lane standards for the Section I project stretch. Improvement proposals are based on the “Manual of Specifications and Standards for 4-laning of highways”, which has published as IRC: SP: 74 – 2014.

Considering the importance of the project, careful planning has been made to provide various components of the highway and associated utilities, which affect the safety and operation of the highway. The proposed improvements are aimed at easing traffic congestion; reducing the accident, improving physical characteristics of the road, which includes geometry, pavement strength, drainage; and enhancing the aesthetic. Hence, the following optimum level of improvements is proposed:

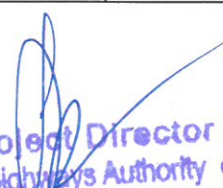
- Widening of the project road as per the traffic warrants;
- Strengthening/reconstruction of the existing pavement for the entire length;
- Provision of footpath cum built-up drain at Built up and industrial locations;
- Improve / redesign sharp curves;
- Widening/ reconstruction of existing culverts and provision of additional culverts depending on the drainage condition;
- Junction improvements;
- Provision for Pedestrian crossing facilities;
- Provision of traffic signs and road furniture;
- Provision of bus shelters;
- Shifting of utilities;
- Land acquisition, R&R and other social impacts.

## 6. FOREST STRETCHES ALONG THE PROJECT ROAD:

Package II stretch of proposed project highway starts at **Mailanahalli Cross Road** (at chainage **Km 66+540**) and ends at **Kururahalli Cross Road** (at chainage **to Km 119+790**) within Tumkur and Hassan Districts and has a length of 53.25 km.

The proposed package II alignment passes adjacent to some of the reserved forests shown in the following table. The total forest land to be diverted is 2.476 Hectares.

Sl. No.	Forest Sy No.	Village/Hobli/Taluk	Chainage (km)		LHS/R HS	Forest Area (Ha)
			From	To		
1	30	Kallanaykanahalli/Kasaba/ Arasikere	107+860	108+010	LHS	0.217
2	36		108+200	108+420	RHS	0.702
3	94	Byragondanahalli/Banavara/ Arasikere	113+820	113+900	RHS	0.202
4	131	Chaluvanahalli/Banavara/ Arasikere	113+860	114+020	LHS	0.227
5	95	Byragondanahalli/Banavara/ Arasikere	113+900	114+440	RHS	1.128

  
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		<b>Total</b>				<b>2.476</b>
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**7. JUSTIFICATION:**

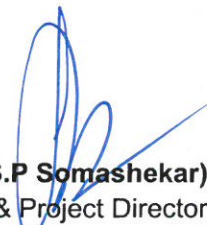
The existing highway is a two lane road with or without paved shoulders varying in width from 7.0 m to 15.0 m carriage way. There has been an increase in the traffic volume in the recent past necessitating the widening of existing road from Tumkur to Shimoga to 4 lanes. The width of the highway is being increased up to 60 m incorporating median along the centre line. The existing road is geometrically poor with respect to alignment and has concerns over safety of road users.

The existing alignment is followed during design but where the alignment is geometrically poor with respect to alignment and a threat to safety of road users, geometrical improvements such as smoothening of sharp curves has been recommended as per Indian Road Congress (IRC) specifications. While doing so, curved alignments at forest stretches adjacent to highway have been smoothened keeping the designed vehicle speed and the safety of the road users.

Technical, economical and environmental attributes have been considered during finalising the alignment and all possible efforts have been made to avoid the forest land. It is further stated that the area of forest land involved in the proposed alignment for improvement of **Package II** stretch of NH 206 is bare minimum. The attempt has also been made for alternative alignments to avoid forest land and there are no feasible alternatives found.

Date: 15.09.2017

Place: Chitradurga

  
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