OFFICE OF THE CHIEF ENGINEER, HIGHWAY, WESTERN ZONE,
PUBLIC WORKS DEPARTMENT, ITANAGAR, ARUNACHAL PRADESH

PROJECT:- **PROPOSAL FOR DIVERSION OF 29.421 HACTARES OF FOREST LAND FOR FOUR LANING OF NH-415(NH-52A) FROM KM 40.400 TO 59.170 (ITANAGAR TO BANDARDEWA SECTION) IN THE STATE OF ARUNACHAL PRADESH UNDER ANNUAL PLAN 2016-17 ON EPC MODE.**

Total area of the land required to be diverted for Four Laning of the existing road from Chainage KM40.400 TO KM59.170 = 29.421 Hectares

TABLE-B: ESTIMATION OF COST OF FOREST DIVERSION (AS PER MoEF &CC GUIDELINE DATED 1ST AUGUST,2017, RELATED TO COST BENEFIT ANALYSIS)

SL NO.	PARAMETER	REMARKS
1	Ecosystem Services Loses due to proposed forest diversion	Environmental Losses is quantified as follows:- ❖ Total RF area proposed for Diversion =29.421 Hectares (between Pappu Nallah to Banderdewa under Durpong Reserve Forest) ❖ Environmental value of one Hectares of Proposed forest with a density of 0.4 to 0.5 being diverted **I.E Forest= 29.421 Hactares *7.50Lacs*2 =441.32 Lacs** ❖ There will be minimal impact on the environment as plantation will be carried out on the open face of the forest.
2	Loss of animal Husbandry productivity , including loss of Fodder	**NIL, :-** Productivity of Livestock will not be affected by this construction as the area is no inhabited by such livestock
3	Cost of Human Settlement	NIL, The proposed road is being constructed along the existing double lane road and there is no such major displacement of people from the area, hence there will be no cost of human settlement

OFFICE OF THE CHIEF ENGINEER, HIGHWAY, WESTERN ZONE,
PUBLIC WORKS DEPARTMENT, ITANAGAR, ARUNACHAL PRADESH

4	Loss of public facilities & administrative infrastructure Roads, Buildings schools dispensaries, Electrical Lines, Railway lines on forest land or which would require forest land if facilities were diverted due to the project.	**NIL,** , since these facilities are not available Inside the proposed forest area for diversion, Existing Electrical lines will be re-erected within the PROW after completion and no additional cost will be required
5	Possession value of Forest Land Diverted	NIL
6	Cost of Suffering to oust sees	**Not Applicable**, since there will be no displacement of people in the area.
7	Habitat Fragmentation Cost	**NIL**
8	Compensatory afforestation an soil and moisture conservation cost	Compensatory Aforestation Cost amounting to approximately **170.00 lacs** wherever applicable, I .e close **to 2.88 lacs per** hectare including soil & moisture conservation in the compensatory afforsestation
	Total Loss (against proposed Forest land diversion)	**Rs.611.00 Lacs**

Chief Engineer (Highway, Western Zone
PWD, Arunachal Pradesh, Itanagar

Chief Engineer (H/W)
Western Zone/PWD, AP
Itanagar – 791111

OFFICE OF THE CHIEF ENGINEER, HIGHWAY, WESTERN ZONE,
PUBLIC WORKS DEPARTMENT, ITANAGAR, ARUNACHAL PRADESH

TABLE –C:- ESTIMATION OF BENEFIT OF FOREST DIVERSION IN COST BENEFIT ANALYSIS (AS PER MoEF & CC GUIDELINES DATED 1ST AUGUST 2017 RELATED TO COST BENEFIR ANALYSIS

SL NO.	PARAMETER	REMARKS
1	Increase in productivity, attribute to the specific project.	The highway NH-415(old NH-52A) connect the state capital with major cities of Assam through Bandardeva in the east and Hollongi on the west and covers a distance of 59.170KM. The proposed project covers a distance of 18.770 Km (Pappunallah to Banderdewa} on the stretch and will connect important administrative centers at Nahrlagun, Yupia, Nirjuli, Doimukh and Banderdewa along its alignment. It help reducing the isolation of various places in the region. As this is the only surface link to the state capital, Itanagar is connected to the rest of the country through NH-415 which connects to NH-52 at Gohpur in Biswanath District of Assam and to NH-37 to Guwahati, Upper Assam. This road will provide inter-state connectivity to almost all the north eastern states and to the rest of the world. **The project is costing the government to Rs. 34100.oo Lacs approx for 20 years**
2	Benefit to Economy due to the specific project	The Road NH-415 is a vital link and the line communication for the local inhabitants of the forward area of District Papumpare and State Capital of Arunachal Pradesh. Most of the Socio-economical developments of Arunachal Pradesh depend on communication through this road. Induced traffic, Congestion of traffic loss of Time and Money of the traffic users. These are some of the problems attributed to construct this road to 4 lane specification. ❖ On the current average daily traffic of 7400, Traffic Jam, Congestion, loss of time and expenses on strolling traffic per day equals = Rs.0.74 lacs and Rs.270.10 per **years . For 20 years =5402.00 Lacs**
3	Numbers of People Benefitted due to specific project	Large number of Population of AP depend on the business they run in the capital as this road connects to all the district and is a centre for the businesses. This road also serves as the linkage to the border area and facilitates the moment of Army & the a

		Para- military forces bordering China
4	Economic benefit due to direct & indirect employment due to project	During the construction stage employment will be generated for skilled and unskilled manpower. About 200 persons will be employed during the peak working season for construction of the road resulting in about 65000 man days would be required during the construction phase of three years. And about 50 people will get the job for up keeping the facility for 20 years. The local people will also get the opportunity to carry out contract works subject to their work capability/expertise- After the completion; about 50 people will be employed to upkeep and maintenance of road and other structures. The road will facilitate in tourism and horticulture where local population as per their experience and qualification will get benefitted. **Approximately 825.00 Lacs for a period of 20 years**
5	Economic benefit due to the compensatory afforestation	Compensatory afforestation of 58.84 hectares' of diverted forest land @Rs. 3.5 Lacs/Ha for 50 years (as per guidelines issued by MoEF vide letter No. 5-3/2007-FC/ Dated 05.02.2009 = **205.94Lacs**
6	Total	**Rs. 40,532.94 , Total Say Rs. 40,533 Lacs**

Cost Benefit Ratio i.e Project Benefit/forest loss=40533/611=66:1

Hence the Project has a very high benefit to the state as compared to loss of forest**. The total benefit to Loss Ratio is approximately 66 times.**

Chief Engineer (HWY)
Western Zone, PWD, AP
Itanagar – 791111

Chief Engineer (Highway, Western Zone
PWD, Arunachal Pradesh, Itanagar