

**GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT**

Gram: Chiefworks

Office of the Chief Engineer (EZ)

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No.CEAP(EZ)/WG-137/2007-08/

Dated 10th April, 2008.

To

All Superintending Engineers,
Public Works Department,
Arunachal Pradesh.

All Executive Engineers,
Public Works Department,
Arunachal Pradesh.

Sub :- Pre-feasibility Report (PFR) on Trans-Arunachal Highway(TAH).

In continuation to the meeting taken by Commissioner (PWD) on 9th April,2008 and the series of SMS flashed by the undersigned on the subject matter quoted above, the following important points may be considered during pre-feasibility studies on TAH.

1. Land Acquisition: The Right of way (ROW) of 30 metres shall have to be adopted. The PFR shall reflect problems of encumbrances and technical constraints likely to be faced during acquisition of land . Existing utilities falling within the ROW like HT Line and Telephone/Electrical posts and conduits, compensation likely to be paid to agricultural/horticultural/tea garden owners and removal of temporary huts/permanent structures shall have to be identified in the report. **It is once again reiterated that 100% land has to be acquired for the project before award of work.**

2. Forest Clearance: The route of TAH has to be demarcated on the basis the statutory status of land like Unclassified Forest (UCF), Reserve Forest (RF), community/individual land and land free from encumbrances. For road segments passing through forest, prior approval/forest clearance of Ministry of Environment and Forests (MOEF) will be necessary before the award of contracts. For community/individual lands, the method of land acquisition is to be ascertained in consultation with the local administration. There are instances in which the villagers have claimed over the rights over the land. This may vary from place to place.

Though the Ministry has suggested some flexible system for speedy and automatic procedure, the State Govt. must be in readiness to undertake procedures prescribed for obtaining Forest Clearance. All related Acts/Rules/Circulars related to forest and environment matters are available in website.

As far as possible, the route within the **Reserve Forest should be avoided.** In this regard, **Letter No. F.No. 11-48/2002-FC dated 29th April/2005** (uploaded in

website and enclosed herewith) may be referred to, in which all kinds of restrictions have been imposed for building of carpeted roads.

3. **Quarry locations**: One of the important objectives of the PFR is to identify Quarries along the route. The **identified quarries shall have to be got reserved by Govt.** of Arunachal Pradesh so as to avoid any hindrances during implementation. Procedures to be followed must be understood from Forest Department/Department Mining and Minor Forest Produce. In some places, there may be individual/community ownerships on river banks. Suggested actions in this regard may be highlighted in PFR.

4. **Explosive Godown**: Massive earth-cutting is expected during the formation work, which will involve huge requirement of explosives. Most of the explosives godowns possessed by PWD have gone defunct and are of smaller capacity. Explosive godowns of bigger capacity must be planned in key locations, along the route to cater to the needs where 2-lanning programmes are in the pipe-line. Provision for recruitment of Work-Charged Blaster in the Department shall have to be examined. Re-distribution of WC staff must be done keeping in mind the need for blasters. Tentative locations of explosive godowns may be suggested in maps and enclosed in the PFR.

5. **Departmental Survey**: The preliminary exercises of PFR shall be done departmentally by PWD through EEs/AEs/JEs. Departmental execution of Pre-feasibility Report is being insisted upon to enhance capacity building of officers of the Department. Officers must have basic knowledge of operating computer systems and various softwares. Design software like MX-Roads etc. are being upgraded. All literatures on IRC publications shall be made available from zone office. Superintending Engineers and Executive Engineers are requested to depute officers to collect CDs/Books and other literatures available in Zone Office.

Chief Engineer (P-10, MoRTH) desires that the required survey instruments like Total Station and other survey instruments could be procured immediately. Requisition for procurement of Survey Instruments like Total Stations or other needy survey instruments may be placed for which financial support shall be available. SEs and EEs are requested to work out details as per IRC provisions/ actual field requirement for taking up with the Ministry.

6. **Re-alignment due to HEP** : Detail survey studies by some of the Power Developers are in progress concurrently. Some of the sections on Trans-Arunachal Highway may fall under submergence zone for example 'Pasighat-Pangin road' in East Siang District. SEs/EEs must be in close touch with field units of Department of Hydro Power Department as well as the private Power Developers and ascertain the areas requiring diversion due to submergence. Few documents have been received so far which are enclosed herewith for further examination.

7. **Pre-feasibility Report in segments** : The MORTH vide their letter no.12037/7/2008/Ar.P.NH-10 dated 04-02-2008 (photocopy enclosed) has desired that the Pre-feasibility Report may be submitted in convenient sections. In the meeting

held with the Commissioner (PWD) on 09-04-2008, the division wise jurisdiction of the TAH has been drawn up and **is enclosed herewith** for ready reference. The Executive Engineers shall prepare the PFR of the TAH segment falling within their jurisdiction and submit the same to the Superintending Engineer. For segments falling under the BRO, close liaison has to be effected with BRO for expeditious collection of field data. The report on the following segments are required to be submitted to the Central Ministry **by 15th May, 2008.**

- 1) Seppa-Sagalee-Hoj
- 2) Pappu Nallah-Yupia-Potin
- 3) Changlang-Khonsa
- 4) Pasighat-Pangin

The report on the remaining segments shall be submitted to the Central Ministry by 15th June, 2008. Hence, it is once again emphasized that field data collection should begin in right earnest for preparation of the reports so that the time horizons prescribed above could be adhered to. Ground implementation of this project is expected to commence from **October 2008.**

8. Ministry Circular on Formation Width: The Central Ministry has stipulated a formation width of 12m for construction of double lane National Highways in hilly/mountainous terrain. The circular **no.NH-12037/633/2006/NH-1 dated 9th March, 2008 is enclosed herewith** for guidance.

9. SEs to prepare final PFR : The Superintending Engineers are requested to play an absolute pro-active role in finalizing the PFRs prior to submission to the Central Ministry. Relevant IRC codes and SP:19 should be procured and utilized. The Commissioner (PWD) has desired that PWD should not miss this historic opportunity of implementing a project of such a magnitude which will be cherished by the citizens of this country for times to come.

Encl: **As stated above.**



(Bora Ete),
Chief Engineer, (EZ)
PWD, Itanagar.

Copy to:

1. The Commissioner (PWD), Govt. of Arunachal Pradesh for information please along with all stated enclosures.
2. The Secretary (Planning), Govt. of Arunachal Pradesh for information please along with all stated enclosures..
3. The Secretary (Power), Govt. of Arunachal Pradesh, Itanagar for information please along with all stated enclosures.
4. The Chief Engineer (D&P)/Chief Engineer (WZ)/ Chief Engineer (S&I) for information along with all stated enclosures.



(Bora Ete),
Chief Engineer (EZ)

GOVERNMENT OF INDIA
MINISTRY OF SHIPPING ROAD TRANSPORT & HIGHWAYS
(DEPTT. OF ROAD TRANSPORT & HIGHWAYS)

TRANSPORT BHAWAN,
1 – PARLIAMENT STREET,
NEW DELHI – 110 001

No. NH-12037/633/2006/NH-1

9th March 2007

To

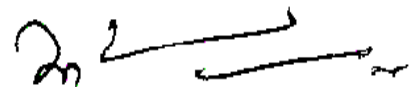
1. The Secretary of all States/UTs (in charge of PWD)
2. The Engineer-in-Chief and Chief Engineers of State PWDs and UTs (dealing with National Highways)
3. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, Naraina, New Delhi
4. The Chairman, National Highways Authority of India, G-5&6, Sector-10, Dwarka, New Delhi-75

SUB: MINISTRY'S GUIDELINE REGARDING FORMATION WIDTH, GEOMETRICS IMPROVEMENT AND SAFETY MEASURES ON HILL ROADS.

Sir,

Please find enclosed herewith Ministry's revised guidelines regarding formation width improvement of geometrics and essential safety features on the National Highways in Hilly/mountainous terrain. These guidelines regarding formation width may be brought to the notice of concerned officials/field Engineers of your Department.

Yours faithfully,



(MANOJ KUMAR)
SUPERINTENDING ENGINEER
MEMBER SECRETARY

MINISTRY'S GUIDELINES REGARDING FORMATION WIDTH, GEOMETRICS IMPROVEMENT AND SAFETY MEASURES ON HILL ROADS.

It has been decided with the approval of competent authority in the Ministry that the overall formation width of National Highways in hilly/mountainous terrain may be kept as 12 m, comprising 7 m wide carriageway flanked with 2.5 m wide shoulders. The drain and parapet/safety railings will be accommodated within the width of the shoulders.

2. The increased formation width will enhance operations on the road and traffic movement due to the following.

- (i) More space would be available for the parking of disabled vehicles, without interfering with two way movement.
- (ii) Two lane movement of traffic would be possible in the event of some stretches being affected by Land Slides etc.
- (iii) Movement of heavy/large size Military and Commercial Vehicles would be easier.
- (iv) Capacity of the road is expected to increase due to large space becoming available for maneuverability.

3. However, it has been, felt that considering extra cost of hill cutting involved due to increase in the width of the formation, the revised standard could be implemented in stages. Priority may be given to provide 12 m formation on new National Highways and on the existing National Highways stretches, where widening of the carriageway is to be carried out. The widening of formation to 12 m on 2 lane National Highways already having 10 m formation width may be accorded lower priority.

4. All other geometric design standards for the hill roads, except the formation width may continue to be followed as recommended in IRC Special Publication No. 48:1998 'Manual for Hill Roads'.

5. The requirement of road safety measures for National Highways in hill roads were also reviewed and it has been found that the existing guidelines and standards prescribed by the Ministry appear to be adequate, however, these are not being provided/implemented by the implementing agencies. The Implementing Agencies are, therefore, advised by the Ministry to give due importance to safety aspects of National Highways in hill roads and ensure that safety measures, such as mandatory, cautionary and informatory signboards, parapet walls, railings, crash barriers, slope protection, delineators, drains, extra widening at curves, passing places at suitable intervals, rock stabilization, treatment of land slides are provided at critical locations.

Yours faithfully,



(MANOJ KUMAR)
SUPERINTENDING ENGINEER
MEMBER SECRETARY

F. No. 11-48/2002-FC
Government of India
Ministry of Environment & Forests
F.C. Division

Paryavaran Bhawan, CGO Complex,
Lodhi Road, New Delhi – 110 003,
New Delhi, the 29th April 2005.

To

The Principal Secretary (Forests)
All States/UTs.

Sub: **Guidelines under Forest (Conservation) Act, 1980, for up-gradation of
'Kutcha road constructed prior to 1980 in forest areas, to Pucca roads'**

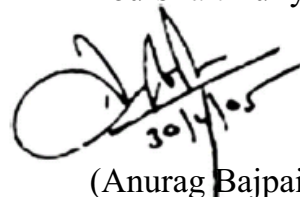
Sir,

In continuation of this Ministry's letter of even number dated 14-9-2004 regarding guidelines for repair and maintenance of roads constructed on forest lands prior to 1980, and with reference to the above-mentioned subject I am directed to convey the approval of the Central Government to the following guidelines, meant for up-gradation of 'Kutcha roads constructed prior to 1980 in forest areas, to Pucca roads':—

1. The up-gradation of roads constructed in forest areas prior to 1980 from 'Kutcha to Pucca' is allowed to the extent that these roads are not black topped/tarred, and if during the process of up-gradation, these roads need to be black topped/tarred, prior environmental clearance shall be sought by the user agency in this regard.
2. For such up-gradation in protected areas like National Park/Sanctuaries, prior permission of National Board of Wildlife and the Supreme Court shall be taken by the State / UT Government.
3. Fire for melting of coal tar and mixing, shall be lit at a safe distance from the trees/vegetation, which shall be decided by the concerned Divisional Forest Officer. For such constructions, it is better to avoid dry/hot windy seasons. For this purpose, fuelwood shall be purchased by the implementing agency in advance from the depot of State Forest Development Corporation.
4. No crushing/breaking of stones shall be allowed inside forest areas. Readymade materials shall be used for up-gradation of such roads.
5. Both sides of the up-graded roads shall be reinforced with brick/stone works, and vegetative measures to check soil erosion, at the project cost, in consultation with the Divisional Forest Officer.
6. No tree felling shall be allowed.

7. No widening of roads shall be undertaken without prior permission of the Central Government under Forest (Conservation) Act, 1980.
8. No breaking of fresh forest land shall be carried out.
9. Plantation activities if the concerned Divisional Forest Officer funds it necessary, shall be taken up along the road at the project cost immediately. The plantation shall be maintained at the project cost.
10. No labour camp shall be established on the forest lands.
11. No work shall be allowed after sunset.
12. Any other conditions that the Divisional Forest Officer may impose from time to time to the protection and improvement of flora and fauna in the forest area, shall be applicable.
13. Any damage to forest area due to such up-gradation works shall be compensated by the implementing agency from the project cost. The extent of damage shall be assessed by the concerned Divisional Forest Officer.
14. State Forest Department shall establish permanent check posts o strategic locations on such roads which are already up-graded/under up-gradation.

Yours faithfully,



(Anurag Bajpai)

Assistant Inspector General of Forests

Copy to:

1. Secretary, Ministry of Home Affairs, Government of India, New Delhi.
2. Secretary, Ministry of Rural Development, Government of India, New Delhi.
3. Secretary, Ministry of Tribal Affairs, Government of India, New Delhi.
4. Secretary, Ministry of Panchayati Raji, Government of India, New Delhi.
5. The principal Chief Conservator of Forests, All States and UTs.
6. The Chief Conservator of Forest (Central), All Regional Offices, Ministry of Environment & Forests.
7. The Nodal Officer (FC), Forest Department, All States/UTs.
8. Director (FC).
9. AIGF(P)/AIGF(S)
10. Guard file.

RESPONSIBILITY ENTRUSTED TO PWD DIVISION FOR SUBMISSION OF PRE-FEASIBILITY REPORT

Sl. No.	Name of Division	Name of District	Jurisdiction		Length in Km		Remarks
			From	To	B.R.O.	P.W.D.	
1	Tawang	Tawang	Tawang	Lhou			
2	Jang	Tawang	Lhou	Sela Pass			
3	Bomdila	West Kameng	Sela Pass	Palizi			
4	Seppa	East Kameng	Palizi	Khodaso			
5	Sagalee	Papumpare	Khodaso	Hoj			
6	Doimukh	Papumpare	Papu Nallah	Putin			
7	Ziro	Lower Subansiri	Putin	Bopi			
8	Daporijo	Upper Subansiri	Bopi	Subansiri Bridge			
9	Dumporijo	Upper Subansiri	Subansiri Bridge	Tai			
10	Basar	West Siang	Tai	Bame			
11	Along	West Siang	Bame	Jini			
12	Boleng	East Siang	Jini	Rotung			
13	Pasighat	East Siang	Rotung	Aohali			
14	Roing	Lower Dibang Valley	Aohali	Paya			
15	Tezu	Lohit	Paya	Parsuramkund Bridge			
16	Namsai	Lohit	Parsuramkund Bridge	Bordumsa			
17	Jairampur	Changlang	Bordumsa	Manmao			
18	Changlang	Changlang	Manmao	22 Km of C-K Road			
19	Khonsa	Tirap	22 Km of C-K Road	Tissa Bridge			
20	Longding	Tirap	Tissa Bridge	Kanubari			

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