

MOST IMMEDIATE

**GOVERNMENT OF INDIA
MINISTRY OF SHIPPING, ROAD TRANSPORT & HIGHWAYS
DEPARTMENT OF ROAD TRANSPORT & HIGHWAYS**

**Transport Bhawan,
1, Parliament Street,
New Delhi – 110 001**

No. 12037/2008/Ar.P/NH-10

Dated the 16th January, 2008

In continuation of the meeting notice of even number dated 10th January, 2008 (copy enclosed), a copy of the background note and points for discussion in the meeting is sent herewith.

2. It is again requested to kindly make it convenient to attend the meeting or depute a senior officer to attend the same. Meeting will be held at 3:30 pm in Conference Hall, Ground Floor.



(Ravinder)

**Executive Engineer
For Director General (RD) & Special Secretary**

1. Secretary, Ministry of Power.
2. Secretary, Ministry of DoNER.
3. Secretary, Ministry of Rural Development.
4. Secretary, Planning Commission.
5. Secretary, Department of Border Management.
6. Chief Secretary, Arunachal Pradesh.
7. Director General, Border Roads.
8. Director General, Road Development.
9. Chief Engineer (P 10).
10. Chief Engineer, PWD, Arunachal Pradesh.

Copy to Secretary, Road Transport & Highways.



(Ravinder)

**Executive Engineer
For Director General (RD) & Special Secretary**

Note:

Meeting attended by me on 17.01.2008 and later discussed with Chief Engineer P-10 on 18.01.2008. Ministry intends to constitute PIU for implementation by PWD Arunachal Pradesh. List of working contractors in Arunachal Pradesh was also wanted by him immediately. Pl refer the last 3 pages of the enclosure.



Bora Ete

**Chief Engineer (EZ), PWD,
Camp New Delhi (18.01.2008)**

Meeting on Road Development in Arunachal Pradesh to be taken by Secretary, Road Transport & Highways on 17.1.2008 at 3.30 P.M. – Background Note and Points for Discussion.

As a follow up to the decisions taken in the meeting held by Principal Secretary to Prime Minister on 5.1.2008, Secretary, Department of Road Transport & Highways has convened a meeting on 17.1.2008 to decide on the road connectivity package for Arunachal Pradesh, inter-alia, covering the following:

- Trans Arunachal Highway;
- Phasing of various road projects;
- Implementation Agencies;
- Innovative implementation models;
- Funding under various schemes viz, SARDP-NE, NLCPR, BADP, PMGSY, etc.
- Adequate flexibility in execution;
- Substantial enhancement of implementation capacity.

2. Secretary, Power was requested to furnish the requirement of road connectivity of Hydropower Projects in Arunachal Pradesh. A meeting was held by Secretary, Power on 11.1.2008 with the Developers of Power Projects. Following this meeting, the requirement of road connectivity to various power projects was discussed by Chief Engineer (dealing with NER), Department of Road Transport & Highways, individually with the representative of Developers on 12.1.2008. Eight Power Project Developers participated on the meeting. Based on the information made available by these Developers, their total requirement of road connectivity and additional roads to be included (over and above the roads included in various programmes of the Department) has been worked out (**Annex. 1**). The Ministry of Power and Government of Arunachal Pradesh may take following further actions in this regard:

- (i) Road connectivity requirement of the remaining Power Projects may be assessed; and
- (ii) Details of **Annex 1** may be got verified from the above 8 Developers.

3. The Government of Arunachal Pradesh has sent the details of the various links of roads to be developed/improved to form Trans Arunachal Highway and 2-lane Border Highway. It has been informed by Government of Arunachal Pradesh that total length of Trans Arunachal Highway is 1839 Km, out of which 1031 Km is already included under Phase 'B' of SARDP-NE and 808 Km to be included. Further, the Government of Arunachal Pradesh has identified road links aggregating to 2733 Km forming the proposed 2-lane Border Highway. Out of this 1234 Km (212 Km in Phase 'A' and 1022 Km in Phase 'B' of SARDP-NE) are already included and 1499 Km is to be added. In addition, it has been proposed by Government of Arunachal Pradesh that 220 Km length may be added to provide 2-lane connectivity to the remaining 3 District Headquarter towns, out of total 16. The requirement of additional roads to serve Hydropower projects based on the requirement furnished by 8 Power Project Developers comes to about 1000

Km. Therefore, the total additional requirement of Arunachal Pradesh comes to 3527 Km, in addition to 2951 Km already included in SARDP-NE. the roads under China Study Group and other roads being improved by MOD are in addition. The 4-lane connectivity to Itanagar is also in addition to the above requirement. Based on this requirement, a Package for integrated development of road connectivity in Arunachal Pradesh has been prepared (**Annex 2**). This package, after necessary modifications in the light of discussions in the meeting could be commended to PMO.

4. Phasing of various roads is proposed, as under:-

- (i) State Capital Town Itanagar should be connected through a 4-lane highway with east-west corridor by 2011-12 (end of 11th Plan);
- (ii) All District Headquarter Towns be connected by 2-lane roads by 2011-12;
- (iii) Completion of road connectivity for power projects by 2012-13 keeping in view the timings of the movement of plant & requirement for the projects;
- (iv) Trans Arunachal Highway be completed by 2015-16; and
- (v) 2-lane border highway should be completed by 2016-17 (end of 12th plan).

5. **Implementation Agencies:**

A Note on Implementation Agencies for SARDP-NE is attached (**Annex 3**). Decision about Border Highway and Trans Arunachal Highway as well as the additional roads to serve power projects is yet to be taken. The exercise about the implementation agencies for these additional roads could be carried out separately, after the decision.

6. **Innovative implementation models**

6. Most of the projects will have to be taken up on EPC basis, involving the following agencies:

- BRO
- NHAI
- State PWDs
- Some of the Public Sector Undertakings, such as NBCC, IRCON, NHPC, NTPC etc. Letters were written to IRCON and NTPC. IRCON has shown interest only in 2 roads in Sikkim, while NBCC has evinced general interest in NER. There are, however, keen on nomination basis.
- The Department will set up PIUs directly under its administrative control to take up execution of selected projects.

6.2 It is proposed that some of NH projects would be taken up on BOT (Annuity) basis.

7. **Funding**

In the NER, we are at the initial stage of providing basic road connectivity. The construction costs are high and traffic volumes are low. Insurgency is at its peak. BOT (Toll) option of funding, therefore, is not feasible in the regions at this stage. GBS will have to be the primary source of funding the road development in NER, including Arunachal Pradesh. On the whole, the following sources of funding could be attempted for development of primary road network in NER, including Arunachal Pradesh:

- GBS the primary source;
- Annuity (can be tried for selected roads). This, however would be additionality only for 3 years, as annuity payments from the budget would start after 3 years;
- Loan from External Funding Agencies (World Bank, ADB etc.). This would also finally get charged to the GBS in future years;
- Cess on Developers of Power Projects in Arunachal Pradesh. Even if Cess @ Rs. 10 lakh/MW (about 2% of the capital cost) is imposed on the Power Project Developers in Arunachal Pradesh for primary road network, this would generate only about Rs. 2000 crore. This amount is far less compared to the outlays required for road development.
- NLCPR – about Rs. 500 crore per year is spent by M/o DONER from NLCPR on State roads. These roads are the responsibility of either State Government or local body. This amount may be diverted to SARDP-NE.

8. **Flexibility in execution**

Department should be free to decide the mode of funding (Annuity, EPC etc.). At present, a lot of time is lost in the experimentation of various options.

Cumbersome financial procedure will have to be reviewed and simplified for speedy execution, consistent with broad financial guidelines. An out put based system is required, rather than merely procedure based.

Procurement procedures and tendering process will be rationalized, simplified and centralized to avoid delay and multiple decision levels.

Forest and MoEF clearances have to be made objective. Some of the trees will have to be cut, if roads have to be built. The requirement of forest and environmental clearances may be dispensed with for improvement of existing roads. The clearance

should be automatic, subject to certain guidelines on compensatory afforestation. For new roads, a simplified system may be prescribed to accord clearance by MoEF in a time bound manner.

9. Enhancement of implementation capacity

9.1 Measures already taken by the Department

9.1.1 Induction of construction equipment in BRO. Total outlay of works under this Department executed by BRO in NER was about Rs. 250 crore annually till 2005-06, i.e. before start of SARDP-NE. Total expenditure during 2006-07 (the first year of start of SARDP-NE) was only marginally up at about Rs. 330 crore (on NH+ SARDP-NE). The expenditure during 2007-08 is likely to be about Rs. 550 crore {Rs. 170 cr on NH(O)+ Rs. 30 cr on NH maintenance + Rs. 350 cr on SARDP-NE}. This is the first year of induction of equipment. In future, even with the same human resources, BRO should be able to spend about Rs. 1000 crore annually on works of this Department from 2008-09 onwards.

9.1.2 Mobilisation of local Contractors. 8 middle level local Contractors are presently working on SARDP-NE projects in Assam. These Contractors have already purchased required plan and machinery for construction of good quality roads. In the delegation to Bangkok led by Minister, DoNER, 6 of these 8 Contractors participated in a bid to identify foreign partners for technical & financial collaboration. An MoU was signed between the Government of Assam and Contractor's Association, Thailand. The collaborations will become reality as and when more and more works are offered to these Contractors. It is estimated that these 8 Contractors together can execute works of about Rs. 800 crore annually from 2009-10 onwards. At least a Dozen of other local Contractors are waiting for similar opportunities. It is safe to assume that additional capacity of about Rs. 1500 crore annually can be built only through the local Contractors.

9.1.3 To enhance supervision capacity, National Quality Monitors and Peer Review Experts for DPR preparation are to be engaged. Department has decided to outsource this works to Indian Roads Congress. The Department has also decided to set up Project Implementation Units directly under its control. Such units are proposed to be set up at places where the State PWD is weak, or are not responding to the development needs. Since the staff will have to be borrowed from other Departments of the Central Government as well as from State Government, simple and fast procedure for finalisation of depositions of staff will require certain relaxation to the existing rules & procedures. Department will make necessary proposals in this regard. The Department also proposes to prepare a panel of Experts/Highway Engineers for engagement for short assignments at market rates.

9.1.4 The Department has purchased a large number of road construction equipment and deployed them in the NER. At present about 300 equipment are available with various

PWDs in NER. A system of optimal utilization of these equipment may be by involving a private equipment management Company would be considered by the Department.

9.2 Measures yet to be taken

9.2.1 BRO executes the works Departmentally, with supplies taken from Contractors. The Department has suggested that **BRO should engage Contractors** for execution of works, at least, in the hinterland locations. If this is done, even with the existing human resources, additional capacity to spend at least Rs. 500 crore by BRO could be created.

9.2.2 The **role of out side Contractors** cannot be understated. They are already working on East-West Highway in Assam. The progress on their projects has not been so good so far due to several reasons. However, with the Construction activity picking up and new and better road communication links getting established, the state of law & order in NER will improve substantially in the region and outside Contractors would be willing to participate. A meeting with these Contractors is being convened shortly by Secretary, Road Transport & Highways to take feedback from them to enable assessment in this regard. The effort is to get the contribution of about Rs. 2000 crore annually from the Contractors from outside NER from 2009-10 onwards.

9.2.3 Even though the North East is blessed with rivers and mountains carrying sand, stones etc. in abundance. However, **availability of these road construction materials is a key concern to the speed of construction and cost of construction**, particularly when only 6 months in a year are available for the construction activities. Stone aggregates, sand, chips, are not available locally and have to be transported from long haulage, or the quality is not good, or the availability is restricted. The Department had requested the Chief Secretaries of all North Eastern states to take effective steps to identify more quarries all along the network of roads from where road construction materials could be borrowed easily and simplify & rationalize the system of giving lease to eliminate monopoly and rationalize the royalty structure (some of the states have increased royalty and other taxes on road construction materials substantially in the recent part, in effect partially neutralizing the impact of stepped up allocation for roads). Nothing in this regard has been done by the State Governments, so far. This matter needs to be discussed with the States.

9.2.4 For supervision & control of works by the Government, substantial capacity has to be created. At least the following measures are necessary in this regard:

- Training of the engineers of BRO & PWDs and others to deal with new situations;
- Reorganising the working of PWDs. The Department has already identified the areas in which the reorganization is required (**Annex 4**). Since each PWD in each PWD in the NER is unique in itself, it is proposed to quickly study the requirement of each through a group of 2-3 experts, discuss the measures

to be taken in the workshop and make recommendations to the respective State Governments. It is also proposed that a start up meeting will be taken by Secretary, Road Transport & Highways with all the PWDs, together.

- There is a huge shortage of trained manpower in the field of Highways. It is therefore important that per person output has to be increased. At present, supervision of works in the State PWDs is through Work Divisions, headed by Executive Engineer. These Divisions have large number of Assistant Engineers and Junior Engineers as well as other staff. A system of lean and thin (but adequate) Project Implementation Unit (PIU) is proposed to be introduced. Under this system, the total staff in PIU will be far less than the strength of the present Division and the turnover will be 3-4 times of the present turnover. A note of model PIU is enclosed.
- An MIS based monitoring system will have to be introduced. Activity will be outsourced.

9.3 Implementation capacity of about Rs. 5000 crore per annum for road construction in NER under this Department could be created in the above manner. The scale of the programme needs to be contained within this capacity, at least for the present for efficient implementation. A properly formulated programme if taken at unrealistic/unmanageable scale may be difficult to implement and may turn out to be bad programme. Even the costs may rise exponentially, in view of shortage of resources. Even the construction materials may not be available in the required quantity to cope up with the large programme.

10. Special Dispensation to connect Itanagar under NHDP

4-laning of 345 Km national highway from Bahitha Charali to Itanagar, via Banderdewa has been included in NHDP-III to connect Itanagar. NHDP-III is essentially a BOT (Toll) programme. The feasibility of BOT (Toll) is quite low in the NER, due to high construction costs and low traffic volume and other problems. The Department would move a case to seek dispensation from CCEA to implement 4-lane connectivity to Itanagar to connect it with Nagaon (Nagaon- Tezpur- Gohpur- Itanagar with much reduced length of about 200 Km) on EPC basis.

Annex-I

**Assessment of requirement of road connectivity for Hydropower Electric
Projects in Arunachal Pradesh**

Project Developer	Road link required		Additionality over existing programme of Department	
	Road link	Km	Road link	Km
NPTC	Improvement of Sitapani-Roing section of NH 52 (already in Phase B of SARDP-NE)		Construction of Dholla-Sadia bridge connecting NH 37 in Assam and NH 52 in Ar. Pradesh near Roing.	55
	Improvement of Roing-Anini State road (already in Phase B of SARDP-NE)			
	Construction of Dholla-Sadia bridge connecting NH 37 in Assam and NH 52 in Ar. Pradesh near Roing.	55		
NHPC	Construction of Dholla-Sadia bridge connecting NH 37 in Assam and NH 52 in Ar. Pradesh near Roing.		Improvement of Tawang-Khumba road	80
	Improvement of Roing-Hunli Road (part of Rong-Anini road, Phase 'B')		Improvement of Tawang Yusum road	50
	Improvement of Jonai-Roing section of NH 52 (already in Phase B of SARDP-NE)		Improvement of existing Paka-Gongo road	54
	Improvement of Balukpong-Tawang Road (part of Balipara-Tawang road, Phase 'B')		Construction of new Paka-Gongo road	87
	Improvement of Tawang-Khumba road	80	Widening/improvement of Daporijo-Menga road	40
	Construction of new Paka-Gongo road	87		
	Widening/improvement of Daporijo-Paka road	20		
	Widening/improvement of Daporijo-Menga road	25		
	Realignment of Menga-Taliha road	40		
	Widening/improvement of Kimin-Tamen road	150		

Project Developer	Road link required		Additionality over existing programme of Department	
	Road link	Km	Road link	Km
NEEPCo	Improvement of Balipara-Nechipu-Khupi road (already in Phase B of SARDP-NE)		Construction/Improvement of Seppa-Talong-Pake-Khenewa road	40
	Construction/Improvement Of Seppa-Talong-Pake-Khenewa road	40	Construction/Improvement of Pake-Lada road	41
	Construction/Improvement of Pake-Lada road (check NLCPR)	41	Construction/Improvement of Harmuti-Doimukh-Yazali road	82
	Construction/Improvement of Khupi-Kimin road (part of Kimin-Ziro: 10-15 would be submerged)	27		
	Construction/Improvement Of Harmuti-Doimukh-Yazali road	82		
Reliance	Construction/Improvement of Lekhabali-Bame-Along road (already in Phase 'B' of SARDP-NE)		Construction/Improvement of Along-Kaying-Tato	140
	Construction/Improvement of Along-Kaying-Tato	140		
GMR	Construction/Improvement of Balipara-Nechipu-Bana-Seppa road (already in Phase 'B' of SARDP-NE)			
	Construction/Improvement of Seppa-Talong road	18		
Athena Demwe Power Pvt. Ltd.	Improvement of NH 52 (already in Phase 'B' of SARDP-NE)		Levels of new road being constructed by BRO between Parasuramkund and Hayuliang to be consistent with reservoir levels.	
	Levels of new road being constructed by BRO between Parasuramkund and Hayuliang to be consistent with reservoir levels.			

Project Developer	Road link required		Additionality over existing programme of Department	
	Road link	Km	Road link	Km
Japy + D.S. Construction	Improvement of NH 52 between Jonai and Pasighat (already in Phase 'B' of SARDP-NE)		Construction/Improvement of Pasighat-Mariyang road on left bank of Lohit	20
	Construction/Improvement of Pasighat-Mariyang road on left bank of Lohit	20	Construction/Improvement of Pasighat-Pangin road on right bank of Lohit	27
	Construction/Improvement of Pasighat-Pangin road on right bank of Lohit	27	Construction/Improvement of Pangin-Along road	26
	Construction/Improvement of Pangin-Along road	26	Construction/Improvement of Tato-Lungte road	40
	Construction/Improvement of Tato-Lungte road	40		
Mountain Fall India Pvt Ltd	Improvement of Dibugarh-Tinsukia-Parasumramkund-T.V. Point (Tezzu bypass NH 52) (already in Phase A & B of SARDP-NE)		Construction/Improvement of Lepanglat-Chingwati-Walong road	70
	Construction/Improvement of Tezu-Lepanglat road (already on Phase 'B' of SARDP-NE)			
	Construction/Improvement of Lepanglat-Chingwati-Walong road	70		

Package of road connectivity to Arunachal Pradesh

- 1. To connect Itanagar by 4-lane highway to be constructed by 2011-12 on EPC basis.**
- 2. To provide 2-lane road connectivity to all the 16 District Headquarter Towns of the State by 2011-12. (2-lane road connectivity of 13 District Headquarter Towns is already provided on Phase 'B' of SARDP-NE and additional 220 Km length to be included).**
- 3. To take construction of bridge over Sadia/Dholaghat connecting NH 37 and NH 52 and additional roads of about 1000Km to serve the power project for completion by 2012-13.**
- 4. To form 1839 Km long Trans Arunachal Highway by 2015-16, connecting Tawang on the western side and Bimlapur on the eastern side and include the reaming roads aggregating to 800Km. (SARDP-NE already provides for improvement of 1031 Km roads on the alignment of Trans Arunachal Highway).**
- 5. To complete 2-lane border highway of 2733 Km length by 2016-17 (1234 Km roads on the proposed alignment of this border highway are already included in SARDP-NE, the remaining length of 1499km need to be added).**

(The above package would require addition of 3527 Km roads, over and above 2951 Km roads already included in SARDP-NE and NHDP)

Annexe-3**Note on allocation of SARDP-NE roads to various Executing Agencies**

SARDP-NE envisages widening/improvement of various roads aggregating to 8737Km which are to be implemented in two phases.

2. Phase 'A' has been approved for implementation of 2304 Km road. Executive Agencies have been designated given below:-

Agency	Length (in Km)
BRO	749
PWD, Arunachal Pradesh	32
PWD, Assam	440
PWD, Meghalaya	64
PWD, Mizoram	79
PWD, Sikkim	22
NHAI	918
Total	2304

3. Phase 'B' covers 6433 Km roads. Government has approved preparation of DPR only for these roads. The work of DPR preparation has been assigned to various agencies as tabulated below:

Agency	Length (in Km)
BRO	3741
PWD, Arunachal Pradesh	18
PWD, Assam	409
PWD, Meghalaya	64306
PWD, Mizoram	277
PWD, Sikkim	165
Directly by DoRT&H	1517
Total	6433

4. The allocation of DRP preparation has been made keeping in view that the same agencies will also carry out execution of the works.

5. There has been a demand from BRO that their work load may be reduced. Accordingly, an exercise has been done re-allocate the roads of Phase 'B' to various executive agencies on the following principles:

- i) State roads, which are under the entrustment of State PWDs would remain with State PWD, except in the States of Manipur, Nagaland and Tripura, where such roads are also proposed to be given to BRO.
- ii) G.S. roads, which are to be improved primarily to upgrade connectivity to District Headquarter towns would be executed by State PWDs.
- iii) The roads, which are included on the advise of MEA are strategically important and therefore, these are proposed to be retained with BRO.
- iv) Most of the NHs would be implemented directly by the Department, either through PWDs, or through NHAI, or by setting up Project Implementation Units. Action to prepare DPRs in respect of these roads has already been initiated. DEA has been requested to approach World Bank / ADB for load assistance.

6. The summary of length allocated to various Executive Agencies on the above principles is given below alongwith comparison with the existing allocation for Phase 'B':

Agency	Existing allocated			Proposed Allocation		
	NH	States/G S roads	Total	NH	State/GS roads	Total
BRO	202	3539	3741	202	1936	2138
Directly by DoRT&H	1517	0	1517	1517	0	1517
PWD Ar. Pradesh	0	18	18	0	1341	1341
PWD Assam	0	409	409	0	471	471
PWD Manipur	0	0	0	0	0	0
PWD Meghalaya	83	223	306	83	223	306
PWD Mizoram	155	122	277	155	272	427
PWD Nagaland	0	0	0	0	0	0
PWD Sikkim	0	165	165	0	233	233
PWD Tripura	0	0	0	0	0	0
Total	1957	4476	6433	1957	4476	6433

7. As far as Phase 'A' is concerned, there is neither demand to allocate the stretches, nor it is felt necessary at this stage.

Annex-4**Areas identified for improvement in relation to
Capacity building of State PWDs**

1. Policies & programs to imbibe vision, long term & practical approach;
2. Inclusive maintenance, with focus on asset management, serviceability;
3. Adequate & assured funds for maintenance;
4. Improve quality of project preparation. Department to have in-house capacity & capability to supervise & monitor the Consultants;
5. More inputs at senior level are required;
6. Interaction with Consultants at senior level for speedy decisions. Payments to Consultants to be fast;
7. Create capacity to effectively handle the pre-construction activities: land acquisition, shifting of utilities, M.o.E.F. clearance, tree cutting, other statutory clearances etc.;
8. Have a policy of not engaging the Contractor until clear site is available.
9. Improve adaptability & adoptability of latest designs, new materials, specifications, & equipment. Promote Research & Development in real sense;
10. Increase exposure to international best practices and road engineering. Improve training of staff;
11. Effectively utilize and modernize the existing research and testing laboratories, as additionality to Contractor's facilities;
12. Set up bench mark standards for Contractors, Consultants and Departments;
13. Review of procurement procedures and contract formats to bring in rationality, transparency, equity and speedy award & execution;
14. Make the supervision more effective and accountable. Rationalize the role of supervision Consultant;
15. Make monitoring & control objective and result oriented, with credible threats;
16. Increase productivity of staff and Work Divisions. Quantum jump in volume by productivity increase of the hour;

17. Overhauling of road engineering practices, business procedures and core functions is required;
18. Change the mind set from doing the Foreman' job to Engineer's job. Planners, Designers, Researchers be given importance and recognition;
19. Ensure provision of required working facilities to the staff;
20. Rationalize the delegation;
21. Simplify & rationalize the complex practices & procedures;
22. Have an effective policy on transfer & posting of the staff to eliminate exterior influence and arbitrariness;
23. Update the PWD manual;
24. Review the delegation between Chief Engineers' office and Government to get more powers;
25. Document the procedures and rules to minimize external interference.

(a)

Structure of Project Implementation Unit

Composition: Departmental Staff

Sl. No.	Designation	Number	Work to be handled
1.	Executive Engineer	1	Overall in-charge
2.	Assistant Engineer/Junior Engineer	3	To work independently, one on each project. There would be 3-4 projects of Rs. 20 crore to Rs. 50 crore. Assistant Engineer is preferable, so that he can be trained to act as head of unit in the absence of Executive Engineer.
3.	Accountant	1	

Staff on Outsourcing basis:

Sl. No.	Post	Number	Work to be handled
1.	Quantity Surveyor	1	To check layout plus quantities of works.
2.	Quality Control Staff	2	They will carry out confirmatory tests, arrange testing and ensure that contractor's staff is testing regularly.
3.	Private Assistant	1	
4.	Peon	1	

(b)

Calculation of Expenses on a typical PIU, as percentage of the amount of work executed.

A. Expenses to be incurred by State Government

A1 Salary + Social cost of staff.

Sl. No.	Designation	Number	Yearly salary per person	Total yearly salary
1.	Executive Engineer	1	Rs. 3,00,000	Rs. 3,00,000
2.	Assistant Engineer/ Junior Engineer	3	Rs. 2,50,000	Rs. 7,50,000
3.	Accountant	1	Rs. 2,50,000	Rs. 2,50,000
				Rs. 13,00,000 (a)

- Add social cost and administrative cost to be incurred by State Government @ 100% of above = 13,00,000/= (b)
- Add cost of contribution by Superintending Engineer and Chief Engineer and other officers of the State @ 50% of (a) + (b) = 13,00,000 (c)
- Add Travel and TA/District Authority expenses per year – Rs. 5,00,000 ...(d)
Total cost of above to be incurred by State Government; increases in wages due to Pay Commission etc. Rs. 22,00,000 (f)

Total (e) + (f) = Rs. 66,00,000/-
Say the turnover of unit is about Rs. 25 crore.
This works out to roughly 3%

If Unit is to be established by State Government, they would received 3% as Agency Charge

B. Estimated Expenses on facilities to be outsourced

(Rs. in lakh)

Sl. No.	Post	Number	Yearly compensation	Total/Year
1.	Quantity Surveyor	1	6.00	6.00
2.	Quality Control Staff	2	6.00	12.00
3.	Private Assistant	1	2.00	2.00
4.	Peon	1	1.00	1.00
			Total	21.00

(c)

C. Working Tools & Facilities

(Rs. in lakh)

Sl. No.	Facility	Number	Yearly Expenses per unit	Total/Year
1.	Staff Car with Driver	2	4.00	8.00
2.	Rent of office premises	-	-	3.00
3.	Local (TA/District Authority)	-	-	3.00
4.	Other Office Expenses	-	-	5.00
			Total	19.00

Total B+C = Rs. 40.00 lakh i.e. about 1.60%

D. Expenses on testing of materials and other quality control measures say Rs. 10 lakh/year or 0.40%.

Total Estimated Expenses = 3%+1.6%+0.4% = 5%.
against 10% incurred at present.

Sample calculation collected from Ministry of Road Transport & Highways, New Delhi on 18.01.2008