
Ministry of Transport
Department of Surface Transport
(Roads Wing)



**MINISTRY'S TECHNICAL CIRCULARS AND DIRECTIVES
ON NATIONAL HIGHWAYS AND CENTRALLY
SPONSORED ROAD AND BRIDGE PROJECTS**

VOLUME I

Published by the
Indian Roads Congress
On behalf of the Govt. of India,
Ministry of Transport, Department
of Surface Transport (Roads Wing)

*Copies can be had by V.P.P. from
the Secretary, Indian Roads Congress,
Jamnagar House, Shahjahan Road,
New Delhi — 110 011.*

First published : July, 1986

(The Rights of Publication and Translation are reserved)

Printed at M/s Sagar Printers and Publishers, New Delhi-110 003

FOREWORD

Technical circulars, guidelines and directives play a very important role in the functioning of any organisation. For better performance, these circulars must be appropriately classified, compiled and updated periodically. This publication marks the first step in this direction as Ministry's volume of technical circulars embracing, planning, design, project preparation, construction and monitoring of National Highways and other Central Schemes as well as management, upkeep and accounting of central machinery, all appropriately grouped in a book form.

2. The policy circulars given herein are for information and guidance of officers of the Ministry and the State Public Works Departments. Periodic updating of these will of course be necessary to accommodate amendments and modifications based on feed-back etc. The document is expected not only to arm the highway engineers with a treasure of authentic information but also aid their administrative judgement. It is hoped that the feed-back will throw ideas on further shaping and updating of the document besides stimulating further thinking leading to appropriate revisions.

3. This compilation includes policy and other circulars issued upto 16th August 1985. Those circulars on which IRC standards, Ministry's Specifications etc. have since been published have not been included in this compilation. Also, some circulars have been edited by deleting those portions on which standards have been published subsequent to their issue. In compiling the circulars, it is quite likely that there might have been some inadvertent omissions. If these are brought to the notice of the Ministry, it will be of help in incorporating the same in future editions.

4. The circulars, notifications etc. are classified subjectwise and arranged in chronological order. A simple decimal coding system is used which permits identification by main subject, subject and sub-topic. The code number is printed on the top corner of the first page of each circular, the number after the last decimal point indicating serial number of the circular. Future circulars will follow this classification and have the succeeding numbers. If a circular covers two or more subjects, the appropriate subject codes are printed on it and cross references are given in the relevant subject indexes without repeating the circular. The documents are printed and bound in loose-leaf form to facilitate addition of new circulars to it. The holder of this compilation should keep on updating it as new circulars are received. New subjects may be added in the blank numbers, wherever necessary.

5. While dealing with multifaceted subject of highway engineering where value judgement is quite important, we cannot be tied to a fixed framework that curbs innovative thinking. Improved and innovative solutions based on current thinking and experience should always be welcome without being unduly tied down to guidelines. Such solutions should always be critically evaluated and if found relevant and practicable should be accepted for common good.

New Delhi, July 1986

K.K. Sarin
Director General (Road Development) and
Addl. Secretary to the Govt. of India

TABLE OF CONTENTS

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
VOLUME - I			
100	HIGHWAY POLICIES & ADMINISTRATION		
110	Authority		
	111	Relevant extracts from the Constitution of India	111/1-3
	112	National Highways Act & Amendments	112/1-4
	113	Notification of National Highways	113/1-10
	114	National Highways Rules & Amendments	114/1-10
120	Financial Powers, Pro- ject Estimates & Sanc- tion Procedure		
	121	National Highway Works	
		121.1	Scope of Original & Revised Estimates
		121.2	Directions on project preparation & coor- dination between Roads & Bridges
		121.3	Agency and other charges & receipts
		121.4	Procedure for submis- sion of cases to Minis- ter, MOF, PIB, EFC & World Bank
		121.5	Revised estimates, per- missible excess & change of scope
		121.6	Delegated powers to States & splitting of works
	122	Central Road Fund Works	
		122.1	Resolution governing CRF
		122.2	Procedure
		122.3	Setting up of Cells for R&D, Traffic, Quality Promotion etc.

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
	123	Roads of Inter-State or Economic Importance	123/1-7
	124	Union Territories & other centrally con- trolled road works, Tribal Roads, Strategic Roads	
		124.1 Centrally controlled works	124.1/1
		124.2 Union Territories	124.2/1-4
		124.3 Roads in Tribal Areas	124.3/1-7
		124.4 Strategic Roads	124.4/1-2
130	Tenders, Contracts & Arbitration		130/1-17
140	N.H. Land Control		
	141	Land Acquisition	141/1-4
	142	NH Property — Inspection Bungalows, Licencing, Status, Access Control	142/1-12
	143	Urban Links, Byepasses, Parallel Service Roads, Barriers	
		143.1 Urban Links	143.1/1-5
		143.2 Byepasses & Parallel Service Roads	143.2/1-4
		143.3 Barriers	143.3/1-2
	144	Ribbon Development, Encroachments & Eviction	144/1-27
	145	Utility Services & Canal Crossings	145/1-10
150	Level Crossings & Over/Under Bridges		150/1-13
160	Levy of Fees & Tolls		160/1-10
170	Highway Organisation Institutional Infrastructure		170/1-12
180	Allocation of Cement & Other Materials		180/1-5
190	Ceremonies & Misc. Directions		
	191	Ceremonies	191/1-3
	192	Miscellaneous Directions	192/1

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
200 HIGHWAY PLANNING & ECONOMICS			
	201	Highway Planning & Budgetting	201/1-8
	202	Highway Inventory	202/2-10
	203	Economic Evaluation	203/1-2
	204	Planning Targets	204/1
	205	Planning Techniques	205/1-4
300 ROAD DESIGN			
	301	Survey & Investigation	301/1-2
	302	Geometric Design	302/1-10
	303	Pavement Design	303/1-8
	304	Embankments & Cut Slopes	304/1-8
	305	Protection Measures & Special Problems — Canal Lining, Erosion Control, Borrow pit practice etc.	305/1-7
400 GUIDELINES ON CONSTRUCTION & RECONSTRUCTION & SPECIFICATIONS			
	401	Widening of Roads	401/1-2
	402	Materials	402/1-2
	403	Sub-base & Base Construction	403/1-3
	404	Bituminous Construction	404/1-9
	405	Concret Construction	405/1-2
	406	Miscellaneous Guidelines	406/1
	407	Specifications — see Ministry of Shipping & Transport Specification for Road & Bridge Works (1st Revision), 1981	
500 CULVERTS, CAUSEWAYS & DRAINAGE			500/1-8
600 TRANSPORTATION, PLANNING, TRAF- FIC REGULATION & ROAD SAFETY			
	601	Traffic Census	601/1-4
	602	Road Signs & Markings	602/1-8
	603	Kilometre Stones	603/1-9

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
	604	Highway Safety — Railings	604/1-4
605	Traffic Regulation		605/1-3
	606	Accidents	606/1-2
	607	Highway Patrolling	607/1-6
	608	Motor Vehicles Act & Orders thereunder.	608/1-20
	609	Traffic Cells	609/1-2
700	WAYSIDE AMENITIES, LANDSCAPING, SOIL CONSERVA- TION AND ENVIRONMENTAL, PROTECTION		
	701	Wayside Amenities	701/1-14
	702	Landscaping & Tree Plantation	702/1-10
	703	Environmental Pro- tection & Soil Conservation	703/1-1
800	Blank		
900	Blank		
VOLUME - II			
1000	BRIDGE WORKS		
1100	Project Preparation		1100/1-17
1200	Sub-soil and Hydraulic Investigations		
	1210	Subsoil Investigations	1210/1-2
	1220	Hydraulic Investigations	
1300	Materials		
	1310	Cement	1310/1-4
	1320	Steel	Blank
1400	Form Work	Refer to IRC 87-1984	
1500	Foundations		
	1510	Well Foundations	1510/1-2
	1520	Other Foundations	Blank
1600	Sub-structure and Bearings		
	1610	Sub-structure	1610/1-2
	1620	Bearings	1620/1-7
1700	Superstructure and other minor components		
	1710	Superstructure	1710/1-14
	1720	Expansion Joints	1720/1
	1730	Wearing Coat	1730/1-6
	1740	Railing and Approach Slab	1740/1

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
1800	Protective Works	Referto relevant IRC Guidelines (Under print)	
1900	Miscellaneous		
	1910	General topics	1910/1
	1920	Safety measures.	1920/1-2
	1930	Rating and testing of bridges	1930/1-2
	1940	Security of bridges —	Blank
	1950	Dismantling	1950/1
	1960	Electrification of bridges	1960/1
	1970	Guidelines regarding execution	1970/1
	1980	Corrosion	1980/1-9
2000	CONSTRUCTION PLANT & MACHINERY		
2100	Utilisation of Central Machinery		2100/1-15
2200	Hire Charges		2200/1-24
2300	Maintenance & Repair Estimates of Central Machinery		2300/1-8
2400	Inventory of Central Machinery		2400/1-24
2500	Condemnation & Dis- posal of Central Machinery		2500/1-3
2600	Modernisation of Road Construction		2600/1-2
2700	Training of Personnel		2700/1-2
2800	Workshops — Central/ Divisional/Mobile		2800/1-6
2900	Miscellaneous		
	2910	Grant of Loan Assis- tance for Machinery	2910/1
	2920	Procurement of Additional Spare Parts	2920/1
	2930	Accidents to Central Machines	2930/1
	2940	Disposal of Machines to State P.W.Ds.	2940/1-2
3000	QUALITY CONTROL		
3100	Roads		3100/1-20
3200	Bridge		3200/1-6

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
4000 MAINTENANCE, FLOOD DAMAGE REPAIR AND PERIODIC INSPECTIONS			
4100 General			
	4110	Maintenance Norms & Scope	4110/1-33
	4120	Abstract Particulars	4120/1-10
	4130	Maintenance Management	4130/1-2
	4140	Release of Funds & Re-appropriation.	4140/1
4200 Road Maintenance & Inspection			
	4210	Maintenance Pro- cedure & Operation — Measures on Flood Damages	4210/1-6
	4220	Maintenance Inspec- tion (See Manual for Maintenance) of Roads	
4300 Bridge Maintenance & Inspection			
	4310	Maintenance Pro- cedure & Operation	4310/1-9
	4320	Inspection of Bridges	
5000 PROGRESS, MONI- TORING, INSPEC- TION & COMPLETION REPORTS			
5100 Progress Reports & Monitoring of Road Construction and Maintenance			5100/1-28
5200 Inspection			5200/1-2
5300 Completion Reports			5300/1-3
6000 ROAD RESEARCH & APPLICATION			
6100 Central Assessment Committee			6100/1-5
6200 Research & Development			6200/1-9
6300 Research Application			6300/1-8

Main Subject Code. Title No.	Subject Code. Title No.	Sub-Topic Code. Title No.	Page No.
7000	ADMINISTRATIVE SET-UP, POWERS & DUTIES OF MINIS- TRY'S OFFICERS & OTHER INSTRUCTIONS		
7100	Organisation at Head- quarters and Jurisdiction.		7100/1-6
7200	Delegated Powers		7200/1-4
7300	Duties, Jurisdiction & specific instructions to ROs and ELOs.		7300/1-13
7400	Internal Administrative Instructions		
	7410	Vigilance, Security, Endorsement of copies, Pattern of Job No. issue of Circulars etc.	7410/1-4
	7420	Handing over charge	7420/1-1
	7430	Parliament Questions	7430/1-2
	7440	Reports to PM Secretariat	7440/1-3
	7450	Audit Paras	7450/1-2
	7460	Official Language	7460/1-6
	7470	Weeding Out of Records	7470/1-6
	7480	Calendar of Returns	7480/1-4
	7490	Miscellaneous	7490/1-2
7500	Internal Directions — General		
	7510	Progress Reports	7510/1-9
	7520	Miscellaneous	7520/1-7
7600	Internal Directions — Roads		7600/1-23
7700	Internal Directions — Bridges		Blank
7800	Internal Directions — Construction Plant		
	7810	Check-list for repair estimates and pro- cedure for account- ing of old parts	7810/1-2
	7820	Utilisation of Central Machinery	7820/1-3

111 RELEVANT EXTRACTS FROM THE CONSTITUTION OF INDIA

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
11 L1	<u>Relevant Extracts from the Constitution of India</u>	Art.No. 19 (1) (d), 19 (5),	111/1
		239 (1), 239(2),	111/1
		245 (1), 245 (2),	111/1
		246 (1), 246 (2),	111/1
		246 (3), 246 (4),	111/1
		249 (1), 252 (1),	111/2
		252 (2), 253 (1),	111/2
		254(1), 254(2)	111/2
		List I-Union List (13, 14, 23, 32, 42, 64)	111/2
		List II-State List (13, 18, 59)	111/3
		List III-Concurrent List (7, 42)	111/3

RELEVANT EXTRACTS FROM THE CONSTITUTION OF INDIA

(Art.19) *Right of Freedom*

- 19 (1) All citizens shall have the right —
- (a)
 - (b)
 - (c)
 - (d) To move freely throughout the territory of India;
 - (e)
 - (f)
 - (g)
- 19 (5) Nothing in sub-clauses (d), (e) and (f) of the said clause shall affect the operation of any existing law in so far as it imposes, or prevent the State from making any law imposing, reasonable restrictions on the exercise of any of the rights conferred by the said sub-clauses either in the interests of the general public or for the protection of the interests of any Scheduled Tribe.

PART VIII—THE UNION TERRITORIES

Administration of
Union territories

- 239 (1) Save as otherwise provided by Parliament by law, every Union Territory shall be administered by the President acting, to such extent as he thinks fit, through an administrator to be appointed by him with such designation as he may specify.
- (2) Notwithstanding anything contained in Para VI, the President may appoint the Governor of a State as the Administrator of an adjoining Union Territory, and where a Governor is so appointed, he shall exercise his functions as such administrator independently of his Council of Ministers.

PART XI — RELATIONS BETWEEN THE UNION AND THE STATES

CHAPTER I — LEGISLATIVE RELATIONS

Distribution of Legislative Powers

Extent of laws made
by Parliament and by
the Legislatures of
States

- 245 (1) Subject to the provisions of this Constitution, Parliament may make laws for the whole or any part of the territory of India, and the legislature of a State may make laws for the whole or any part of the State.
- (2) No law made by Parliament shall be deemed to be invalid on the ground that it would have extra-territorial operation.

Subject matter of
laws made by Parlia-
ment and by the
legislatures of States

- 246 (1) Notwithstanding anything in clauses (2) and (3), Parliament has **exclusive power to make laws with respect to any of the matters enumerated in List I in the Seventh Schedule (in this Constitution referred to as the 'Union List').**
- (2) Notwithstanding anything in clause (3), Parliament, and, subject to **clause (1) the Legislature of any State *** also, have power to make laws with respect to any of the matters enumerated in List III in the Seventh Schedule (in this Constitution referred to as the 'Concurrent List').**
- (3) Subject to clauses (1) and (2), the Legislature of any State * * * has exclusive power to make laws for such State or any part thereof with respect to any of the matters enumerated in List II in the Seventh Schedule (in this Constitution referred to as the "State List").
- (4) **Parliament has power to make laws with respect to any matter for any part of the territory of India not included (in a State) notwithstanding that such matter is a matter enumerated in the State List.**

Power of Parliament to legislate with respect to a matter in the State List in the national interest.

- 249 (1) Notwithstanding anything in the foregoing provisions of this Chapter, if the Council of States has declared by resolution supported by not less than two-thirds of the members present and voting that it is necessary to expedient in the national interest that Parliament should make laws with respect to any matter enumerated in the State List specified in the resolution, it shall be lawful for Parliament to make laws for the whole or any part of the territory of India with respect to that matter while the resolution remains in force.

Power of Parliament to legislate for two or more States by consent and adoption of such legislation by any other State.

- 252 (1) If it appears to the Legislatures of two or more States to be desirable that any of the matters with respect to which Parliament has no power to make laws for the States except as provided in Articles 249 and 250 should be regulated in such States by Parliament by law, and if resolutions to that effect are passed by all the Houses of the Legislatures of those States, it shall be lawful for Parliament to pass an Act for regulating that matter accordingly, and any Act so passed shall apply to such States and to any other State by which it is adopted afterwards by resolution passed in that behalf by the House or, where there are two Houses, by each of the Houses of the Legislature of that State.
- (2) Any Act so passed by Parliament may be amended or repealed by an Act of Parliament passed or adopted in like manner but shall not, as respects any State to which it applies, be amended or repealed by an Act of the Legislature of that State.

Legislation for giving effect to inter-national agreements.

- 253 (1) Notwithstanding anything in the foregoing provisions of this Chapter, Parliament has power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body.

Inconsistency between laws made by Parliament and laws made by the Legislatures of States.

- 254 (1) If any provision of a law made by the Legislature of a State is repugnant to any provision of a law made by Parliament which Parliament is competent to enact, or to any provision of any existing law with respect to one of the matters enumerated in the Concurrent List, then, subject to the provisions of clause (2), the law made by Parliament, whether passed before or after the law made by the Legislature of such State, or, as the case may be, the existing laws, shall prevail and the law made by the legislature of the State shall, to the extent of the repugnancy, be void.
- (2) Where a law made by the Legislature of a State * * * with respect to one of the matters enumerated in the Concurrent List contains any provision repugnant to the provisions of an earlier law made by Parliament or an existing law with respect to that matter, then, the law made by the Legislature of such State shall, if it has been reserved for the consideration of the President and has received his assent, prevail in that State.

Provided that nothing in this clause shall prevent Parliament from enacting at any time any law with respect to the same matter including a law adding to, amending, varying or repealing the law so made by the Legislature of the State.

SEVENTH SCHEDULE

(Article 246)

LIST I — Union List

13. Participation in international conferences, association and other bodies and implementing of decisions made thereat.
14. Entering into treaties and agreements with foreign countries and implementing of treaties, agreements and conventions with foreign countries.

- 23. Highways declared by or under law made by Parliament to be national highways.
- 32. Property of the union and the revenue therefrom, but as regards property situated in a State * * * subject to legislation by the State, save in so far as Parliament by law otherwise provides.
- 42. Inter-State trade and commerce.
- 64. Institutions for scientific or technical education financed by the Government of India wholly or in part and declared by Parliament by law to be institutions of national importance.

SEVENTH SCHEDULE

(Article 246)

LIST II — State List

- 13. Communications, that is to say, road bridges, ferries, and other means of communication not specified in List I; municipal tramways; ropeways; inland waterways and traffic thereon subject to the provisions of List I and List III with regard to such waterways; vehicles other than mechanically propelled vehicles.
- 18. Land, that is to say, rights in or over land, land tenures including the relation of landlord and tenant, and the collection of rents; transfer and alienation of agricultural land; land improvement and agricultural loans; colonization.
- 59. Tolls

SEVENTH SCHEDULE

(Article 246)

LIST III — Concurrent List

- 7. Contracts, including partnership, agency contracts of carriage, and other special forms of contracts, but not including contracts relating to agricultural land.
- 42. Acquisition and requisitioning of property

112 NATIONAL HIGHWAYS ACT AND AMENDMENTS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
112.1	Act No. 48 of 1956 dt. 11.9.1956	1. National Highways Act 1956	112/1
		2. The Schedule- Description of National Highways	
112.2	Notification SRO 1160 dt. 4.4.1957	Date of commence- ment of Act	112/4
<u>112.3</u> 160	The National Highways (Amendment) Act, 1977 (No. 30 of 1977) dt. 12.8.1977	Amendment to the National Highways Act, 1956	112/4

THE NATIONAL HIGHWAYS ACT, 1956

No. 48 of 1956

Dated the 11th September, 1956

An Act to provide for the declaration of certain highways to be national highways and for matters connected therewith.

Be it enacted by Parliament in the Seventh Year of the Republic of India as follows :—

- | | |
|--|--|
| <p>1. (1) This act may be called the National Highways Act, 1956.</p> <p>(2) It extends to the whole of India</p> <p>(3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.</p> | <p>Short title, extent and commencement</p> |
| <p>2. (1) Each of the Highways specified in the Schedule (except such parts, thereof as are situated within any municipal area) is hereby declared to be a national highway.</p> <p>(2) The Central Government may, by notification in the Official Gazette, declare any other highway to be a national highway and on the publication of such notification such highway shall be deemed to be specified in the Schedule.</p> <p>(3) The Central Government may, by like notification, omit any highway from the Schedule and on the publication of such notification, the highways so omitted shall cease to be a national highway.</p> | <p>Declaration of certain highways to be national highways</p> |
| <p>3. In this Act, "municipal area" means with a population of twenty thousand or more the control or management of which is entrusted to a municipal committee, a town area committee, a town committee or any other authority.</p> | |
| <p>4. All national highways shall vest in the Union, and for the purposes of this Act "Highways" include :—</p> <p>(i) all lands appurtenant thereto whether demarcated or not,</p> <p>(ii) all bridges, culverts, tunnels, causeways, carriageways and other structures constructed on or across such highways, and</p> <p>(iii) all fences, trees posts and boundary furlong and mile stones of such highways or any land appurtenant to such highways.</p> | <p>National Highways to vest in the Union</p> |
| <p>5. It shall be the responsibility of the Central Government to develop and maintain in proper repair all national highways; but the Central Government may, by notification in the Official Gazette, direct that any function in relation to the development or maintenance of any national highway shall, subject to such conditions, if any, as may be specified in the notification, also be exercisable by the Government or the State within which the national highway is situated or by any officer of authority subordinate to the Central Government or to the State Government.</p> | <p>Responsibility for development and maintenance of national highways</p> |
| <p>6. The Central Government may give directions to the Government of any State as to the carrying out in the State of any of the provisions of this Act or of any rule, notification or order made thereunder.</p> | <p>Power to issue directions</p> |
| <p>7. (1) The Central Government may, by notification in the Official Gazette levy fees at such rates as may be laid down by rules made in this behalf for services or benefits rendered in relation to the use of ferries, temporary bridges and tunnels on national highways.</p> <p>(2) Such fees when so levied shall be collected in accordance with the rules made under this Act.</p> | <p>Fees for services or benefits rendered on national highways</p> |

- (3) Any fee leviable immediately before the commencement of this Act for services or benefits rendered in relation to the use of ferries, temporary bridges and tunnels on any highway specified in the schedule shall continue to be leviable under this Act unless and until it is altered in exercise of the power conferred by sub-section (1).
8. Notwithstanding anything contained in this Act, the Central Government may enter into an agreement with the Government of any State or with any authority entrusted with the control or management of any municipal area in relation to the development or maintenance of the whole or any part of a national highway situated within the State or, as the case may be, in relation to the development or maintenance of any such part of a highway situated within a municipal area as is referred to in sub-section (1) of section 2 and any such agreement may provide for the sharing of expenditure by the respective parties thereto.
9. (1) The Central Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act.
- (2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely :—
- the manner in which, and the conditions subject to which, any function in relation to the development or maintenance of a national highway or any part thereof may be exercised by the State Government or any officer or authority subordinate to the Central Government or the State Government;
 - the rates at which fees for services rendered in relation to the use of ferries, temporary bridges and tunnels on any national highway may be levied and the manner in which such fees shall be collected;
 - the periodical inspection of national highways and the submission of inspection reports to the Central Government;
 - the reports on works carried out on national highways;
 - any other matter for which provision should be made under this Act.
10. All notifications or agreements issued or entered into under this Act shall be laid before both Houses of Parliament as soon as may be after they are issued or entered into and all rules made under section 9 shall be laid for not less than thirty days before both Houses of Parliament as soon as may be after they are made, and shall be subject to such modifications as Parliament may make during the session in which they are so laid or the session immediately following.

Agreements with
State Governments or
municipalities

Power to make rules

Laying of notifications,
rules, etc. before
Parliament

THE SCHEDULE

(See section 2)

NATIONAL HIGHWAYS

S. No.	National Highway No.	Description of National Highways
1.	1	The highway connecting Delhi, Ambala, Jullundur and Amritsar and proceeding to the border between India and Pakistan.
2.	1 A	The highway connecting Jullundur, Madhopur, Jammu, Banihal Srinagar, Baramula and Uri.
3.	2	The highway connecting Delhi, Mathura, Agra, Kanpur, Allahabad, Banaras, Mohania, Barhi and Calcutta.
4.	3	The highway connecting Agra, Gwalior, Shivpuri, Indore, Dhulia Nasik, Thana and Bombay.
5.	4	The highway starting from its junction near Thana with the highway specified in serial No. 4 and connecting Poona, Belgaum, Hubli, Bangalore, Ranipet and Madras.
6.	5	The highway starting from its junction near Baharagora with the highway specified in serial No. 7 and connecting Cuttack, Bhubaneswar, Visakhapatnam, Vijayawada and Madras.
7.	6	The highway starting from its junction near Dhulia with the highway specified in serial No. 4 and connecting Nagpur, Raipur, Sambalpur, Baharagora and Calcutta.

8. 7 The highway starting from its junction near Banaras with the highway specified in serial No. 3 and connecting Mangawan, Rewa, Jabalpur, Lakhnadon, Nagpur, Hyderabad, Kurnool, Bangalore, Krishnagiri, Salem, Dindigul, Madurai and Cape Comorin.
 9. 8 The highway connecting Delhi, Jaipur, Ajmer, Udaipur, Ahmedabad, Baroda and Bombay.
 10. 8 A The highway connecting Ahmedabad, Limbdi, Morvi and Kandla.
 11. 8 B The highway starting from its junction near Bamanbore with the highway specified in serial No. 10 and connecting Rajkot and Porbandar.
 12. 9 The highway connecting Poona, Sholapur, Hyderabad and Vijayawada.
 13. 10 The highway connecting Delhi and Fazilka and proceeding to the border between India and Pakistan.
 14. 22 The highway connecting Ambala, Kalka, Simla, Narkanda, Rampur and Chini and proceeding to the border between India and Tibet near Shipkila.
 15. 24 The highway connecting Delhi, Bareilly and Lucknow.
 16. 25 The highway connecting Lucknow, Kanpur, Jhansi and Shivpuri.
 17. 26 The highway connecting Jhansi and Lakhnadon.
 18. 27 The highway connecting Allahabad with the highway specified in Serial No. 8 near Mangawan.
 19. 28 The highway starting from its junction near Barauni with the highway specified in serial No. 23 and connecting Muzaffarpur, Pipra, Gorakhpur and Lucknow.
 20. 28 A The highway starting from its junction near Pipra with the highway specified in serial No. 19 and connecting Sagauli and Raxaul and proceeding to the border between India and Nepal.
 21. 29 The highway connecting Gorakhpur, Ghazipur and Banaras.
 22. 30 The highway starting from its junction near Mohania with the highway specified in serial No. 3 and connecting Patna and Bakhtiyarpur.
 23. 31 The highway starting from its junction near Barhi with the highway specified in serial No. 31 and connecting Bakhtiyarpur, Mohameh, Purnea, Dalkhola, Siliguri, Sivok, and Cooch Behar and proceeding to its junction with the highway specified in serial No. 28 near Goalpara.
 24. 31 A The highway connecting Sivok and Gangtok.
 25. 33 The highway starting from its junction near Barhi with the highway specified in serial No. 3 and connecting Ranchi and Tatanagar and proceeding to its junction with the highway specified in serial No. 7 near Baharagora.
 26. 34 The highway starting from its junction near Dalkhola with the highway specified in serial No. 23 and connecting Berhampore, Barasat and Calcutta.
 27. 35 The highway connecting Barasat and Bangaon and proceeding to the border between India and Pakistan.
 28. 37 The highway starting from its junction near Goalpara with the highway specified in serial No. 23 and connecting Gauhati, Jorabat, Kamargaon, Makum and Saikhoaghat.
 29. 38 The highway connecting Makum, Ledo and Lekhapani.
 30. 39 The highway connecting Kamargaon, Imphal, and Palel and proceeding to the border India and Burma.
 31. 40 The highway connecting Jorabat and Shillong and proceeding to the border between India and Pakistan near Dawki.
 32. 42 The highway starting from its junction near Sambalpur with the highway specified in serial No. 7 and proceeding via Angul to its junction with the highway specified in serial No. 6 near Cuttack.
 33. 43 The highway connecting Raipur and Vizianagaram and proceeding to its junction with the highway specified in serial No. 6 Vizianagaram.
 34. 45 The highway connecting Madras, Tiruchirapalli and Dindigul.
 35. 46 The highway connecting Krishnagiri and Ranipet.
 36. 47 The highway connecting Salem, Coimbatore, Trichur, Ernakulam, Trivandrum and Cape Comorin.
 37. 47 A The highway starting from its junction near Trichur with the highways specified in serial No. 36 and connecting with the West Coast Road near Chalisseri.
 38. 49 The highway connecting Madurai and Dhanushkodi.
 39. 50 The highway connecting Nasik with the highway specified in serial No. 5 near Poona.
-

No. PL-7 (6)/55

Dated, the 4th April, 1957

NOTIFICATION

S.R.O. 1160. In exercise of the powers conferred by sub-section (3) of section 1 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby appoints the 15th day of April, 1957, as the date on which the said Act shall come into force.

**MINISTRY OF LAW, JUSTICE AND COMPANY AFFAIRS
(LEGISLATIVE DEPARTMENT)**

Dated the 12th August, 1977/Sravana 21, 1899 (Saka)

The following Act of Parliament received the assent of the President on the 12th August, 1977, and is hereby published for general information :—

**THE NATIONAL HIGHWAYS (AMENDMENT) ACT, 1977
No. 30 of 1977**

(12th August, 1977)

48 of 1956

An Act to amend the National Highways Act, 1956

Short Title

Be it enacted by Parliament in the Twenty-eighth Year of the Republic of India as follows :—

Amendment of Section 7

1. This Act may be called the National Highways (Amendment) Act, 1977.
2. In section 7 of the National Highways Act, 1956 (herein after referred to as the Principal Act) in sub-section (I),

(i) after the words "the use of ferries" the words, figures and letter "permanent bridges the cost of construction of each of which is more than rupees twenty-five lakhs and which are opened to traffic on or after the 1st day of April, 1976", shall be inserted;

(ii) the following proviso shall be inserted, namely :—

"Provided that if the Central Government is of opinion that it is necessary in the public interest so to do, it may, by like notification, specify any bridge in relation to the use of which fees shall not be leviable under this sub-section".

Amendment of
Section 9

3. In section 9 of the principal Act,-

(i) for clause (b) of sub-section (2), the following clause shall be substituted, namely :—

"(b) the rates at which fees for services rendered in relation to the use of ferries, permanent bridges, temporary bridges and tunnels on any national highway may be levied, and the manner in which such fees shall be collected, under section 7;"

3. Every rule made under this section shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule".

Amendment of
Section 10

4. In section 10 of the Principal Act, the portion beginning with the words and figure "and all rules made under section 9" and ending with the words "or the session immediately following" shall be omitted.

113 NOTIFICATION OF NATIONAL HIGHWAYS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
113.1	Notification SRO 1179 dt. 4.4.57	Power in respect of development of NHs, Delhi & Himachal Pradesh	113/1
113.2	Notification SRO 1181 dt. 4.4.57	Powers in respect of development of NHs to Andhra Pradesh, Assam, Bihar, Bombay, J & K, Kerala, M.P., Madras, Mysore, Orissa, Punjab, Rajasthan, Uttar Pradesh and West Bengal	113/1
113.3	Notification SRO 568 dt. 10.4.58	Declaration of NH No. 32	113/2
113.4	Notification SRO 1199 dt. 4.5.60	Declaration of NH Nos. 11, 12 and 13	113/3
113.5	Notification dt. 12.2.63	Declaration of NH Nos. 31 and 31 B	113/3
113.6	Notification dt. 18.12.67	Declaration of NH 41	113/3
113.7	Notification dt. 21.7.71	Declaration of NH Nos. 4A, 5A, 21, 36, 44	113/4
113.8	Notification SO 602 dt. 23.12.71	Powers in respect of development of NHs to Nagaland (Modification to SRO 1181)	113/4
113.9	Notification SO 179 (E) dt. 7.3.72	Declaration of NHs 7A, 15, 17A, 17A, 23 and 48	113/4
113.10	Notification SO 10 (E) dt. 4.1.73	Powers in respect of development of NHs to Chandigarh, Delhi and Goa	113/5
113.11	Notification SO 1980 dt. 25.5.77	Declaration of NH No. 1 B	113/5
113.12	Notification SO 3114 dt. 18.10.78	Declaration of NH No. 8 C	113/6
113.13	Notification SO 698 (E) dt. 1.9.80	Declaration of NH No. 31C, 51, 52, 52 A, 53, 54.	113/6
113.14	Notification dt. 5.1.81	Powers in respect of development of NHs to Jammu & Kashmir, Gujarat, West Bengal, Assam and Meghalaya	113/6
113.15	Notification dt. 17.2.81	Extension of NH 12 from Biora (in M.P.) to Jaipur (in Rajasthan)	113/7
113.16	Notification dt. 7.11.83	Declaration of NH 45 A	113/7

113

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
113.17	Notification SO 865 (E) dt. 12.11.84	Declaration of NH 4 B	113/8
113.18	Notification SO 868 (E) dt. 17.11.84	Declaration of NH 56	113/8
113.19	PL-5 (2)/85	Summary of NHs as on 17.11.1984	113/8

No. PL-7 (4)/57-II

Dated the 4th April, 1957

NOTIFICATION

SRO. 1179 In exercise of the powers conferred by article 239 of the Constitution, the President hereby directs that the functions in relation to the execution of works pertaining to each of the national highways, described in column 2 of the Schedule hereto annexed shall be exercisable also by the Administrators of the Union Territories of Delhi and Himachal Pradesh within their respective jurisdiction subject to the condition that the Administrator shall, in the exercise of such functions, be bound to comply with the rules for the time being in force made under the National Highways Act, 1956 (48 of 1956).

SCHEDULE

S. No. Description of National Highways

1. So much of National Highways No. 1, No. 2, No. 8, No. 10 and No. 24 as are situated within the Union Territory of Delhi.
2. National Highway No. 22 from Simla and upto the border between India and Tibet near Shipkila situated within the Union Territory of Himachal Pradesh

No. PL-7 (4)/57-I

Dated the 4th April, 1957

NOTIFICATION

SRO. 1181. In exercise of the powers conferred by section 5 of the National Highways Act, 1956 (48 of 1956) the Central Government hereby directs that the functions in relation to the execution of works pertaining to each of the national highways described in column 2 of the Schedule hereto annexed shall be exercisable also by the State Government specified in column 3 of the Schedule against such highway, subject to the condition that the State Government concerned shall, in the exercise of such functions, be bound to comply with the rules for the time being in force made under the said Act.

SCHEDULE

Sl. No.	Description of the national highway	Name of the State Government
1	2	3
1.	So much of national highways No. 4, No. 5, No. 7, No. 9 and No. 43 as are situated within the State of Andhra Pradesh	State Government of Andhra Pradesh
2.	So much of national highway No. 31 as is situated within the State of Assam and national highways No. 37, No. 38, No. 39 and No. 40	State Government of Assam
3.	So much of national highways No. 2, No. 6, No. 28 and No. 31 as are situated within the State of Bihar and national highways No. 28A, No. 30 and No. 33	State Government of Bihar
4.	So much of national highways No. 3, No. 4, No. 6, No. 8 and No. 9 as are situated within the State of Bombay and National Highways No. 8A, No. 8B and No. 50	State Government of Bombay
5.	National Highways No. 1A from approximately mile 125 (from Jullundur) near Jammu and upto Uri, except the Jawhar Tunnel and the approach roads thereto, as is situated within the State of Jammu & Kashmir	State Government of Jammu & Kashmir

6.	So much of national highway No. 47 as is situated within the State of Kerala and National Highway No. 47 A	State Government of Kerala
7.	So much of national highways No. 3 No. 6, No. 7, No. 25, No. 26, No. 27 and No. 43 as are situated within the State of Madhya Pradesh	State Government of Madhya Pradesh
8.	So much of national highways No. 4, No. 5, No. 7 and No. 47 as are situated within the State of Madras and national highways No. 45, No. 46 and No. 49	State Government of Madras
9.	So much of national highways No. 4, No. 7 and No. 9 as are situated within the State of Mysore	State Government of Mysore
10.	So much of national highways No. 5, No. 6 and No. 43 as are situated within the State of Orissa and National Highway No. 42	State Government of Orissa
11.	So much of national highways No. 1, No. 1A (from Jullundur and upto approximately mile 71 near the Malakpur Canal Bridge), No. 2, No. 8 and No. 10 as are situated with the State of Punjab and national highway No. 22 from approximately mile 3 near Ambala and upto approximately mile 91 near Simla	State Government of Punjab
12.	So much of national highway No. 8 as is situated within the State of Rajasthan	State Government of Rajasthan
13.	So much of national highways No. 2, No. 3, No. 7, No. 24, No. 25, No. 26 No. 27 and No. 28 as are situated within the State of Uttar Pradesh and National Highway No. 29	State Government of Uttar Pradesh
14.	So much of national highways No. 2, No. 6, No. 31 and No. 31A as are situated within the State of West Bengal and National Highways No. 34 and No. 35	State Government of West Bengal

No. PL-13 (2)/57

Dated the 10th April, 1958.

NOTIFICATION

S.R.O. 568. In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the Highway starting from its junction near Gobindpur with the National Highway No. 2 and connecting Dhanbad with Jamshedpur to be a National Highway.

The said Highway now declared to be a National Highway shall be deemed to be specified in the Schedule to the National Highways Act, 1956 at serial No. 24-A as National Highway No. 32.

113.4

No. PL-12 (11)/58

Dated the 4th May, 1960

NOTIFICATION

S.R.O. 1199. In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highway specified in the table below to be national highways :

The said highways now declared to be national highways shall be deemed to be specified in the Schedule to the National Highways Act, 1956, with the Serial Number and National Highway Number indicated in the table.

TABLE

Sl No	National Highway No.	Description of national highways
13A	11	The highway connecting Agra, Jaipur and Bikaner
13B	12	The highway connecting Jabalpur, Bhopal and Bhaora
13C	13	The highway connecting Sholapur and Chitradurga.

113.5

Dated the 12th February, 1963

NOTIFICATION

In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956) the Central Government hereby declares the highways starting from North Salmaria on the National Highway No. 31 and proceeding generally via Nalbari, Charali and Amingaon to Pandu on the National Highway No. 37 to be a National Highway.

The said highway, now declared to be a National Highway shall be deemed to be specified in the Schedule to the National Highways Act at serial No. 23 as extension of National Highway No. 31 which shall now be described as under :

S. No. in the Schedule to the N.H. Act 1956	N.H. No.	Description of National Highway
23	31	The Highway starting from its junction near Barhi with the highway specified in Serial No. 3 and connecting Bakhtiarpur, Mokameh, Purnea, Dalkhola, Siliguri, Sivok, Cooch-Bihar, North Salmaria and proceeding generally via Nalbari, Charali and Amingaon to its junction with the highway specified in Serial No. 28 near Pandu.

Consequently, the section of the National Highway starting from near North Salmaria to its junction with National Highway No. 37 near Goalpara and forming part of National Highway No. 31 at present, shall hereafter be deemed to be specified in the Schedule to the National Highways Act after serial No. 24 as National Highway No. 31B, which shall now be described as under :

S. No. in the Schedule to the N.H. Act 1956	N.H. No.	Description of National Highway.
24AA	31B	The highway starting from near North Salmaria to its junction with National Highway No. 37 near Goalpara.

113.6

No. PL-10 (4)/63

Dated the 18th December, 1967

NOTIFICATION

In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956

(48 of 1956), the Central Government hereby declares the highway between its junction (near Kolaghat) with the National Highway No. 6 and the point where it touches Haldia Port to be a national highway.

The said highway now declared to be a national highway shall be deemed to be specified in the Schedule to the National Highways Act, 1956 at serial No. 36A as National Highway No. 41.

113.7

No. PL-5 (17)/69

Dated the 21st July, 1971

NOTIFICATION

In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highways specified in the Table below to be national highways :

TABLE

(Supplement to Schedule to the National Highways Act, 1956 — No. 48 of 1956)

Serial No.	National Highway No.	Description of national highways
5A	4A	The highway connecting Belgaum, Anmod, Ponda and Panaji.
6A	5A	The highway starting from its junction near Haridaspur with N.H. No. 5 and terminating at the Paradip Port.
13D	21	The highway starting from its junction near Chandigarh with the N.H. No. 22 and connecting Rupar, Bilaspur, Mandi, Kulu and Manali.
27A	36	The highway connecting Nowgong Dabaka and Dimapur (Manipur Road)
33A	44	The highway connecting Shillong, Passi, Badarpur and Agartala.

113.8

No. PL-7 (6)/71

Dated the 23rd December, 1971

NOTIFICATION

S.O. 602. In exercising of the powers conferred by section 5 of the National Highways Act, 1956 (48 of 1956) and in partial modification of the notification of the Government of India in the late Ministry of Transport (Roads Wing) No. SRO 1181, dated the 4th April 1957, the Central Government hereby directs that the functions in relation to the development and maintenance of the National Highway No. 39, lying within the State of Nagaland, shall hereafter be exercisable also by the Government of Nagaland instead of the Government of Assam, subject to the condition that the Government of Nagaland shall, in exercise of such functions, be bound to comply with the rules, for the time being in force made under the said Act.

113.9

No. PL-5 (14)/70-II

Dated the 7th March 1972.

NOTIFICATION

S.O. 179 (E) : In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highways specified in the

Table below to be National Highways.

The said highways now declared to be national highways shall be deemed to be specified in the schedule to the said Act, with the serial Number and National Highway Number indicated against each in the said Table.

TABLE

<i>S No.</i>	<i>National Highway No.</i>	<i>Description of national Highways</i>
8A	7A	The highway connecting Palayankottai on N.H. 7 with the Tuticorin Port
13E	15	The highway connecting Pathankot-Amritsar, Bhatinda, Ganganagar, Bikaner, Jaisalmer, Barmer to its junction with N.H. No. 8A near Samakhiali (near Kandla)
13F	17	The highway connecting Pānvel on N.H. No. 4 Mahad, Panaji, Karwar, Mangalore, Cannanore, Calicut (Kozhikode) and Trichur
13G	17A	The highway starting from its junction near Cortalir with N.H. No. 17 and terminating at the Mormugao Port
14A	23	The highway connecting Chas, Ranchi, Rourkela, Talcher and terminating at N.H. No. 42
37A	48	The highway connecting Bangalore, Hassan and Mangalore

113.10

No. PL-17 (6)/72-II

Dated the 4th Jan., 1973

NOTIFICATION

S.O. 10 (E) : In exercise of the powers conferred by article 239 of the Constitution and in supersession of all previous notifications on the subject, the President hereby directs that the functions in relation to the execution of works pertaining to each of the national highways described in column (2) of the schedule here to annexed shall be exercisable also by the Administrators of the Union Territories of Chandigarh, Delhi and Goa within their respective jurisdiction subject to the condition that the Administrator shall in the exercise of such functions, be bound to comply with the rules for the time being in force made under the National Highways Act, 1956 (48 of 1956).

SCHEDULE

<i>S No.</i>	<i>Description of National Highways</i>
1.	So much of national highway No. 21 as is situated within the Union Territory of Chandigarh.
2.	So much of national highways No. 1, No. 2, No. 8, No. 10 and No. 24 as are situated within the Union Territory of Delhi.
3.	So much of national highways No. 4A, and No. 17 as are situated within the Union Territory of Goa, Daman and Diu, and N.H. No. 17A.

113.11

No-PL-5 (3)/77

Dated the 25th May, 1977

NOTIFICATION

S.O. 1980. In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act 1956 (48 of 1956), the Central Government hereby declares the highway starting from its junction at Batote on National Highway No. 1A and connecting with Kishtwar to be a national highway.

The said highway now declared to be a national highway shall be deemed to be specified in the Schedule to the aforesaid Act at Serial No. 2A as National Highway No. 1B.

No. PL-5 (12)/78

Dated the 18th October, 1978

NOTIFICATION

S.O. 3114. In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares that the highway starting from its junction at Chiloda on the National Highway No. 8 in Gujarat, connecting Gandhinagar and terminating at Sarkhej on the National Highway No. 8A shall be a national highway.

The said highway now declared to be a national highway shall be deemed to be specified in the schedule to the aforesaid Act at serial No. 11-A as National Highway No. 8C.

No. RW/PL-5 (14)/80

Dated the 1st September, 1980

NOTIFICATION

S.O. 698 (E). In exercise of the powers conferred by Sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highways specified in the Table below to be national highways.

The said highways now declared to be national highways shall be deemed to be specified in the Schedule to the said Act, with the Serial Number and National Highway Number indicated against each in the said Table.

TABLE

S. No.	National Highway No.	Description of national highways
1	2	3
24AAA	31C	The highway starting from near Galgalia, connecting Baghdogra, Chalsa, Nagrakata, Goyerkata, Dalgaon, Hasimara, Rjabhatkhawa in West Bengal, Kochugaon and Sidli in Assam and terminating near Bijni on National Highway No. 31.
40	51	The highway starting from its junction at Paikan on National Highway No. 37 in Assam, connecting Tura and terminating at Dalu in Meghalaya.
41	52	The highways starting from its junction at Baihata Charali on National Highway No. 31, in Assam, connecting Tezpur, Bander Dewa North Lakhimpur, Pasighat, Tezu, Sitapani and terminating near Sikhoaghat on National Highway No. 37.
42	52 A	The highway starting from its junction at Bander Dewa on National Highway No. 52 in Assam and terminating at Itanagar in Arunachal Pradesh.
43	53	The highway starting from its junction near Badarpur on National Highway No. 44, in Assam connecting Silchar, Jirighat and terminating near Imphal on National Highway No. 39.
44	54	The highway starting from its junction at Silchar in Assam on National Highway No. 53 connecting Aizawl and terminating at Lunglei in Mizoram.

No. PL-10 (99)/80-I

Dated the 5th Jan., 1981

NOTIFICATION

In exercise of the powers conferred by section 5 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby directs that the functions in relation to the execution of works pertaining to each of the national highways described in column 2 of the Schedule hereto annexed shall be exercisable also by the State Government specified in column 3 of the Schedule against such highway subject to the condition that the State Government concerned shall in the exercise of such functions be bound to comply with the rules for the time being in force made under the said Act.

SCHEDULE

Serial No.	Description of the National Highway	Name of the State Government
1	2	3
1.	National Highway No. 1B.	State Government of Jammu & Kashmir
2.	National Highway No. 8C.	State Government of Gujarat
3.	So much of National Highway No. 31C as is situated within the State of West Bengal.	State Government of West Bengal
4.	So much of National Highways No. 31C, No. 51 and No. 52-A as are situated within the State of Assam.	State Government of Assam.
5.	So much of National Highway No. 51 as is situated within the State of Meghalaya	State Government of Meghalaya

113.15

No. PL-5 (8)/78

Dated the 17th Feb., 1981

NOTIFICATION

S.O. In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highways starting from Biaora on the National Highway No. 12 and proceeding generally via Rajgarh Khilchipur, Aklora, Jhalawar, Kota, Bundi, Devli and Tonk and terminating at Jaipur to be a National Highway.

The said Highway, now declared to be a National Highway shall be deemed to be specified in the Schedule to the National Highways Act, 1956, at serial No. 13B, as extension of National Highway No. 12, which shall now be described as under :

S. No. in the Schedule to the NH Act, 1956	N.H. No.	Description of National Highway
1	2	3
13B	12	The highway starting from Jabalpur, connecting Bhopal, Biaora, Rajgarh, Khilchipur, Aklora, Jhalawar, Kota, Bundi, Devli, Tonk and terminating at Jaipur on National Highway No. 8.

113.16

No. RW/PL-10 (27)/82

Dated the 7th Nov., 1983

NOTIFICATION

In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highway specified in the Table below to be a national highway.

The said highway, now declared to be a national highway shall be deemed to be specified in the Schedule to the National Highways Act, 1956 with the serial No. and national highway No. indicated in columns (1) and (2) respectively, of the said Table.

TABLE

Serial No.	National Highway No.	Description of national highway
1	2	3
34 - A	45 - A	The Highway starting from Villupuram on National Highway No. 45 and terminating at Pondicherry.

No. RW/PL-30 (69)/81

Dated the 12th November, 1984

NOTIFICATION

S.O. 865 (E) : In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highway specified in the Table below to be a National Highway.

The said Highway, now declared to be a National Highway, shall be deemed to be specified in the Schedule to the National Highways Act, 1956, with the Serial No. and National Highway No. indicated in columns (1) and (2) respectively, of the said Table.

S. No.	National Highway No.	Description of National Highway
1	2	3
5 - B	4 - B	The Highway starting from its junction with Panvel-Uran State Highway near Nhava-Sheva Port Complex and proceeding further with one arm terminating at Kalamboli on National Highway No. 4 and another arm crossing National Highway 17 near Palaspe and proceeding further to terminate on National Highway No. 4.

No. RW/PL-5 (11)/84

Dated the 17th November, 1984

NOTIFICATION

S.O. 868 (E) : In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares the highway specified in the Table below to be a national highway.

The said highway now declared to be a national highway shall be deemed to be specified in the Schedule to the said Act, with the serial number and the national highway number indicated in the said Table.

TABLE

Serial number	National Highway number	Description of National Highway
45	56	The Highway starting from Lucknow and connecting Jagdishpur Sultanpur and Jaunpur and terminating near Varanasi.

PL-5 (2)/85

SUMMARY OF NATIONAL HIGHWAYS AS ON 17-11-84

S. No.	NH. No.	Length in km (Provisional)	Starting Station	Terminal Station
1	2	3	4	5
1.	1	456	Delhi	Pakistan border (near Amritsar)
2.	1 A	663	Jullundur	Uri
3.	1 B	107	Batote	Kishtwar
4.	2	1490	Delhi	Calcutta
5.	3	1161	Agra	Bombay
6.	4	1235	Madras	Thana (Bombay)
7.	4 A	153	Belgaum	Panaji
8.	4 B	27	Panvel-Uran (near Nhava-Sheva port)	Kalamboli-Palaspe

9.	5	1533	Madras	Jarpokharia Junction with NH. 6 (Orissa)
10.	5 A	77	Haridaspur	Paradip
11.	6	1645	Calcutta	Dhule
12.	7	2369	Varanasi	Kanyakumari
13.	7 A	51	Palayankottai	Tuticorin
14.	8	1428	Delhi	Bombay
15.	8 A	378	Ahmedabad	Kandla
16.	8 B	206	Porbandar	Bamanbore
17.	8 C	46	Chhileda	Sarkhej
18.	9	791	Pune	Vijayawada
19.	10	403	Delhi	Pakistan border (near Fazilka)
20.	11	582	Agra	Bikaner
21.	12	890	Jabalpur	Jaipur
22.	13	491	Sholapur	Chitradurga
23.	15	1526	Pathankot	Samakhiali (near Kandla)
24.	17	1269	Panvel	Edapally (near Cochin)
25.	17 A	19	Cortalim	Marmagao
26.	21	323	Chandigarh (Jn. with NH. 22)	Manali
27.	22	459	Ambala	Shipki-La
28.	23	459	Chas	Nuatta (Near Talchar)
29.	24	438	Delhi	Lucknow
30.	25	319	Lucknow	Shivpuri
31.	26	396	Jhansi	Lakhnadon
32.	27	93	Allahabad	Mangawan
33.	28	570	Lucknow	Barauni
34.	28 A	68	Pipra Kothi	Raxaul (Nepal border)
35.	29	196	Varanasi	Gorakhpur
36.	30	230	Mohania	Bakhtyarpur
37.	31	1125	Barhi	Gauhati
38.	31 A	92	Sivok	Gangtok
39.	31 B	19	North Salmara	Jogighopa
40.	31 C	235	Near Galgalia	Junction with NH 31 (near Bijni)
41.	32	179	Gobindpur	Jamshedpur
42.	33	352	Barhi	Bharagora
43.	34	443	Calcutta	Dalkhola
44.	35	61	Barasat	Bangaon (Bangala Desh)
45.	36	170	Nowgong	Dimapur
46.	37	680	Pandchratna (near Goalpara)	Saikheaghat
47.	38	54	Makum	Lekhapani
48.	39	436	Mumaligarh	Burma border (near Morch)
49.	40	161	Jorhat	Dawki (Bangala Desh Border)
50.	41	51	Kolaghat	Haldia
51.	42	261	Cuttack	Sambalpur
52.	43	551	Raipur	Vizianagaram (Jn. with NH 5)
53.	44	495	Shillong	Agartala
54.	45	387	Madras	Dindigul
55.	45 A	40	Villupuram	Pondicherry
56.	46	132	Krishnagiri	Ranipet
57.	47	640	Salem	Kanyakumari
58.	48	328	Nelamangala (near Bangalore)	Mangalore
59.	49	160	Madurai	Dhanushkodi
60.	50	192	Nasik	Pune
61.	51	149	Paikan (on NH 37)	Dalu
62.	52	850	Baihata (Charali on NH 31)	Junction with NH 37 (near Saikheaghat)
63.	52 A	25	Bahder Dewa (on NH 52)	Itanagar
64.	53	320	Near Badarpur (on NH 44)	Near Imphal (on NH 39)
65.	54	290	Silchar	Lunglei
66.	56	285	Lucknow	Varanasi

113/10

Length in km added during different periods

21,440	Length as on 1.4.1947
815	Added during Pre-Ist Plan (1947-51)
—	During Ist Plan (1951-56)
1,514	During IIInd Plan (1956-61)
179	During IIIrd Plan (1961-66)
52	During interim period (1966-69)
4,819	During IVth Plan (1969-74)
51	Added in July, 1974 due to realignment of NH 17 in Kerala
107	Added in July, 1977 NH 1B in J & K
46	Added in October, 1978 NH. 8 C in Gujarat
1,869	Added on 1.9.80 31 C, 51, 52, 52A 53 & 54
818	Added upto 17.11.84 45 A, 4 B, 56 and Extension of NH 12
<u>31,710</u>	Total length of NH as on 17.11.84 (Provisional)

114 NATIONAL HIGHWAYS RULES & AMENDMENTS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>114.1</u> (120)	Notification SRO 1182 dt. 4.4.57	NH Rules	114/1
<u>114.2</u> (120)	Notification SRO 680 (E) dt. 18.10.76	Amendment of Rules of 1957	114/2
<u>114.3</u> (160)	Notification SO 718 (E) dt. 15.11.78	NH rules for levy of fees for use of permanent bridges costing more than 25 lakhs completed and opened to traffic on or after 1st April, 1976	114/4
<u>114.4</u> (160)	Notification dt. 15.12.80	Amendment of rules of 1978 (fees for use of permanent bridges)	114/9
<u>114.5</u> (160)	Notification SO 6 (E) dt. 10.12.81	—do—	114/10

NOTIFICATION

No. PL-7 (4)/57-III

Dated the 4th April, 1957

S.R.O. 1182. In exercise of the powers conferred by section 9 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby makes the following rules, namely :

1. Short title—These rules may be called the National Highways Rules, 1957
2. Definitions—In these rules, unless the context otherwise requires
 - (a) "Act" means the National Highways Act, 1956.
 - (b) "approved work" means any original work on a national highway in respect of which the Central Government has accorded technical approval and financial sanction;
 - (c) "completion report" means a report required to be furnished under rule 8;
 - (d) "executive agency" means —
 - (i) in the case of a Union Territory the Administrator thereof to whom the functions of the Central Government in relation to the execution of works pertaining to national highways are delegated under article 239 of the Constitution; and
 - (ii) in any other case the State Government to which such functions are delegated under section 5 of the Act; and
 - (e) "progress report" means a report required to be furnished under rule 7.
3. *Detailed estimates of original works* : A detailed estimate for the execution of any original work on a national highway shall be forwarded by the executive agency to the Central Government in such form as the Central Government may require and that Government may accord technical approval and financial sanction to such estimate subject to any conditions it may think fit to impose. Unless authorised by the Central Government, no original work on any national highway shall be undertaken by the executive agency until technical approval and financial sanction have been accorded by that Government except in cases of emergency, such as flood, earthquake or any other force majeure which shall be immediately reported to the Central Government and the Audit Officer concerned, indicating the approximate amount of liability involved.
4. *Abstract of particulars of detailed estimate for maintenance of national highways* : (1) An abstract of the particulars of the detailed estimate for the maintenance of a national highway during each financial year shall be forwarded by the executive agency to the Central Government in such form as the Central Government may require not later than the 1st day of the month of May in that financial year.

Provided that the Central Government may, in any case or class of cases, require the executive agency to forward a detailed estimate or estimates for the maintenance of any national highway in such form as that Government may require.

(2) The Central Government may accord approval to the abstract or the detailed estimate or estimate submitted to it under this rule subject to any conditions it may think fit to impose.
5. *Revised detailed estimate* : When the expenditure upon any original work on a national highway to the detailed estimate of which the Central Government has accorded technical approval and financial sanction exceed, or is likely at any time to exceed, the amount of such estimate by more than ten per cent thereof or by a sum of twenty-five thousand rupees, whichever is less, the executive agency shall forward a revised detailed estimate for such work to the Central Government in such form as the Central Government may require, and the Central Government may accord technical approval and financial sanction to such estimate subject to any conditions it may think fit to impose.
6. *Application for allotment of funds* : An application for the allotment of funds for meeting expenditure on any original work on a national highway or on the maintenance of a national highway during any financial year shall be made by the executive agency to the Central Government in such form as that Government may require and the Central Government shall communicate its decision to the executive agency on such application as soon as possible after such application is received.
7. *Monthly progress report* : The executive agency shall furnish to the Central Government a monthly progress report on every approved work in such form as that Government may require.

8. *Completion report* : As early as possible after the completion of any approved work, the executive agency shall furnish to the Central Government a full and correct report on such completion in such form as that Government may require.
9. *Inspection of works* : The Consulting Engineer to the Government of India (Road Development) or any officer authorised by him in this behalf may inspect at any time any approved work in progress or completed. A report of every such inspection shall be submitted to the Central Government.

114.2
120

No. PL-30 (193)/71

Dated 18th October, 1976

NOTIFICATION

S.O. 680 (E) : In exercise of the powers conferred by section 9 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby makes the following rules further to amend the National Highways Rules, 1957, namely :

1. (1) These Rules may be called the National Highways (Amendment) Rules, 1976.
(2) They shall come into force on the date of their publication in the official Gazette.
2. In the National Highways Rules, 1957 —
(a) for rule 3, the following rule shall be substituted, namely :
3. Detailed estimate of the original work
(1) Where the estimates of the cost for the execution of any original work on a National Highway exceeds Rs. 10.00 lakhs, a detailed estimate of the cost for the execution of the work shall be forwarded by the executive agency to the Central Government in such form as the Central Government may specify in that behalf and that Govt. may accord technical approval and financial sanction to such estimate subject to such conditions as it may think fit to impose.
(2) Where the estimate of the cost for the execution of any original work on a national highway does not exceed Rs 10.00 lakhs, technical approval and financial sanction to the plan and estimate for the execution of such work may be accorded by the executive agency concerned subject to the conditions specified in the Schedule annexed to these rules.
(3) No original work on any national highway shall be undertaken by the executive agency until technical approval and financial sanction to the estimate for the execution of the work have been accorded by the Central Govt. or the executive agency, as the case may be, except in cases of emergency, such as flood, immediately reported to the authority competent to sanction the estimate and the Audit Officer concerned indicating the approximate amount of liability involved.”
(b) for rule 5, the following rule shall be substituted, namely :—
- “5. *Revised detailed estimate* : (1) Where the expenditure upon any original work on a national highway for the detailed estimate of the cost for which the Central Government has accorded technical approval and financial sanction, under sub-rule (1) of rule 3, is likely at any time to exceed, or exceeds, the amount of such estimate by more than fifteen per cent thereof or by a sum of one crore rupees, whichever is less, the executive agency shall forward a revised detailed estimate of the cost for such work to the Central Govt. in such form as that Govt. may specify in that behalf, and the Central Govt. may accord technical approval and financial sanction to the revised detailed estimate subject to such conditions as it may think fit to impose.
(2) Where the expenditure upon any original work on a national highway to the detailed estimate of the cost for which the executive agency concerned has accorded technical approval and financial sanction, under sub-rule (2) of rule 3, is likely at any time to exceed, or exceeds, the amount of such estimate and the revised cost of the original work, including the excess, is likely at any time to exceed, or exceeds by more than fifteen per cent of the original estimate or Rs 10.00 lakhs, the executive agency shall forward a revised detailed estimate of the cost for such work to the Central Govt. in such form as that Govt. may specify and the Central Govt. may accord technical approval and financial sanction to such revised estimate subject to such conditions as it may think fit to impose.
(3) Notwithstanding anything contained in sub-rule (2), where the expenditure upon any original work on a national highway to the detailed estimate of the cost for which the executive agency

concerned has accorded technical approval and financial sanction, under sub-rule (2) of rule 3, is likely at any time to exceed, or exceeds, the amount of such estimate and the revised estimate of the cost for the original work, including the excess, is likely at any time to exceed, or exceeds, by more than fifteen per cent of the original estimate but by not more than fifteen per cent of the rough estimate of the cost for the original work which the executive agency had submitted to the Central Government and obtained the approval of that Government, technical approval and financial sanction to such revised estimate may be accorded by the executive agency concerned subject to the conditions specified in the Schedule annexed to these rules :

Provided that the amount of the revised estimate is not likely to exceed, or does not exceed, Rs 10 lakhs.

Provided further that the excess of expenditure is caused only by routine factors such as increase in the cost of labour or material and not due to revision in the scope or enlargement of the work or specifications already approved.

- (4) Where the expenditure upon any original work on a national highway is likely at any time to exceed, or exceeds, the amount of the estimate of the cost for such work no funds shall be allotted to the work by the Central Govt. in the cases provided for in sub-rules (1), (2) or (3), unless the provisions of those sub-rules are complied with except in cases where the Central Government directs otherwise".

Explanation :— For the removal of doubts, it is hereby declared that in cases where the excess of expenditure is less than the percentage or amount specified in sub-rule (1) or sub-rule (2), it is not necessary to obtain technical approval and financial sanction of the Central Government for the revised estimate in accordance with these sub-rules only if the excess of expenditure is caused by routine factors such as increase in the cost of labour or material and not due to revision in the scope or enlargement of the work or specifications already approved.

- (c) The following Schedule shall be inserted at the end, namely :

THE SCHEDULE [See Rule 3 (2)]

Conditions for the issue of technical approval and financial sanction to Plan and estimate for execution of any original work on a national highway costing an amount not exceeding Rs 10.00 lakhs by the executive agency concerned.

- (1) The executive agency shall forward to the Central Government for approval rough cost estimates along with detailed information in respect of the particulars given below according to the tentative details given in the annual Plan works programme for a particular year, within a period of 3 months after the receipt of annual Plan works programme for the year.
- (a) Proposal in brief with a rough Plan of the area in which the work is to be executed.
 - (b) Extent of preliminary survey and investigation done.
 - (c) Broad features showing the existing position and the improvements desired.
 - (d) Traffic data.
 - (e) Duration of execution.
 - (f) Phasing of expenditure and also physical performance.
 - (g) Rough quantities and estimated cost under broad headings such as :

(1) <i>Road works</i> - Land acquisition; - earth work; - road material	(2) <i>Bridge works</i> - foundations, super-structure, guide bunds, etc.
--	--
 - (h) Detailed specification.
 - (i) List of equipments required for speedy execution of the work.
 - (j) Alignment plan and longitudinal section in case of roads; hydraulic data and outline designs of structures in case of bridges.
 - (k) Particulars for comparison of the similar works carried out in the same region.
- (1) Special features, if any.
- (2) (a) Permissible job sizes shall be regulated according to description given in the annual Plan works programme mentioned under condition (1) and the work shall not be split up.
- (b) In the case of items having lumpsum provision (such as improvement of geometrics, stabilising slipping reaches,

raising roads in submersible sections), each specific location supported by requisite details shall be treated individually.

- (3) Technical approval and financial sanction shall be accorded only in respect of such items of works for which specific provision has been made in the budget during the year for the individual work on the basis of the approval given under condition (1).
- (4) While sanctioning detailed estimates, the executive agency shall ensure that the rough cost estimate for the work appearing in the budget estimates accepted by the Central Government for presentation to Parliament is not exceeded by more than 15%, or the total cost of detailed estimate to be sanctioned by that agency, in no case exceeds Rs 10 lakhs, whichever is less.
- (5) Abstract of cost of sanctioned detailed estimates in all cases shall be submitted by the executive agency in respect of the works sanctioned by that agency and in the case of bridge estimates, in addition, a general outline drawing shall also be submitted. Abstract of cost of sanctioned detailed estimates shall give justification for excess, if any, referred to under condition (4).
- (6) Progress reports in respect of all works sanctioned by the executive agency shall be submitted to the Central Government, in such form and at such periodicity as may be required by the Central Government from time to time.
- (7) Technical approval and financial sanction to plans and estimates for execution of any original work on a national highway shall be accorded by the executive agency only after the approval of an officer of the rank of Chief Engineer or Additional Chief Engineer or Principal Engineer in charge of national highway works has been obtained.
- (8) In case the executive agency considers it necessary to accord technical approval and financial sanction after the approval of officers of the rank of Superintending Engineers possessing requisite technical, administrative and financial powers, the prior approval of the Central Government shall be obtained but in all such cases they shall have to consult the Regional Officer concerned of the Ministry of the Central Government dealing with the National Highways.
- (9) In the cases of projects concerning bypasses, realignment and improvement of geometrics as also designs for bridges of length upto 100 metres and of individual spans not exceeding 30 metres where cost may be within Rs 10 lakhs, no work shall be sanctioned by the executive agency without prior approval of the Regional Officer concerned of the Ministry in the Central Govt. dealing with national highways.
- (10) In the matters relating to technical approval and financial sanction, the following procedure shall be followed namely :
 - (i) In case of the works where standards and designs adopted in the estimates are in accordance with the Indian Roads Congress Code and specifications and any other relevant instructions, guidelines, standard bridge designs, etc., issued by the Central Government from time to time, copies of the sanctions accorded by the executive agency shall invariably be endorsed to the Regional Officers concerned of the Ministry in the Central Government dealing with national highways alongwith complete copy of the estimate so that even after sanction, they could examine the matter and bring to the notice of executive agency deviations from such code, specifications, instructions, guidelines, standard bridge designs, if any.
 - (ii) Where for any work, deviations from approved standards, specifications, instructions, guidelines issued by the Central Government have to be made due to local conditions, no work shall be sanctioned by any executive agency unless a complete copy of the estimate is furnished to the Regional Officer concerned of the Ministry in the Central Government dealing with national highways and his approval has been obtained in accordance with the general instructions issued by them from time to time governing the disposal of such cases. A brief mention of these deviations shall also be made by the executive agency in the abstract estimates to be sent to the Central Government quoting the reference of approval of the Regional Officer concerned.
 - (iii) In all other cases where proposed deviation do not fit in with the general instructions issued by the Central Government or are not necessitated due to local conditions, technical and financial sanction thereto may be accorded by the executive agency with the prior approval of the Central Government on a reference being made in this behalf along with a copy of the detailed estimate through the regional officer of the Ministry of the Central Government dealing with the national highways who shall forward the same to the Central Govt. with his comments thereon.
 - (iv) After the budget estimates have been accepted by the Central Government, the funds likely to be available for the work shall be intimated to the executive agency concerned. Workwise allotment of funds shall be made by the Central Government and the same shall also be communicated to the executive agency concerned for further necessary action as soon as the budget is passed by the Parliament. Sanction for entering into financial commitments may be accorded by the executive agency only after the budget is passed by the Parliament and the same is intimated to the executive agency. All other actions including technical sanction to the project, calling and receipt of tenders, negotiation for their settlement etc., may, however, be taken by the executive agency as soon as the acceptance of the budget estimate by the Central Government has been intimated to it.

114.3

160

NOTIFICATION

S.O. 718 (E). In exercise of the powers conferred by section 9 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby makes the following rules for the levy of fees for services rendered

relating to the use of permanent bridges costing more than Rupees twenty five lakhs each, completed and opened to traffic on or after the 1st day of April, 1976 on national highways, namely:

Short Title Extent
and Commencement

1. (1) These rules may be called the National Highways (Fees for use of Permanent Bridges) Rules, 1978.
- (2) They shall extend to the whole of India.
- (3) They shall come into force on the date of their publication in the Official Gazette.

Definitions

2. In these rules, unless the context otherwise requires :

- (a) 'Act' means the National Highways Act, 1956 (48 of 1956);
- (b) 'executive agency' means —
 - (i) in the case of a Union Territory the Administrator thereof to whom the functions of the Central Government in relation to the execution of works pertaining to national highways are delegated under article 239 of the Constitution;
 - (ii) in the case of national highways administratively placed under the charge of the Border Roads Organisation, the Border Roads Development Board; and
 - (iii) In any other case, the State Government to which such functions are delegated under section 5 of the Act.
- (c) 'Fee Inspector' means a person authorised by the executive agency concerned to collect fee in respect of any mechanical vehicle crossing a permanent bridge and includes every government employee posted on such bridge in connection with the collection of fees;
- (d) 'mechanical vehicle' means any laden or unladen vehicle designed to be driven under its own power including a motor vehicle as defined in clause (18) of section 2 of Motor Vehicles Act, 1939 of 1939 but does not include a cart, tonga, hand-driven or cycle rickshaw, bicycle, tricycle and any other animal or hand driven vehicle;
- (e) 'permanent bridge' means a bridge with permanent structures, the cost of which including the cost of the bridge proper, approach roads, guide bunds and protective works as also structures constructed or improved for collection of fees, is more than Rupees twenty five lakhs and which is completed and opened to traffic on national highways on or after the 1st day of April, 1976;
- (f) 'Sectional Officer' means an officer of the State Public Works Department (Roads and Buildings) or any other Department dealing with national highways having that designation and being in charge of a particular road or bridge located on a national highway.

Rates of Fees
and its Payment

3. There shall be levied and paid to the executive agency on behalf of the Government of India fees on mechanical vehicles for the use of permanent bridges at the rates specified in the schedule to these rules.

Exhibition of
Rates of fees

4. A Table of fees authorised to be levied at any permanent bridge shall be put up in a conspicuous place near a fee collection booth legibly written or printed in English, Hindi and the regional language of the area in which the permanent bridge is situated.

Procedure for
Collection Realisation
of Amount Handling etc.

5. (1) All fees levied under these rules shall be collected by the executive agency concerned departmentally on behalf of the Government of India and for this purpose necessary arrangements shall be made by the executive agency concerned for putting up adequate number of collection booths (operated manually or by automatic arrangements or by combination of both as may be considered suitable by the executive agency) including improvement and widening of approach roads to serve the collection booths so set up.
- (2) There shall be posted at either end of the permanent bridge a Fee Inspector (with necessary police guard to assist) who shall be authorised to collect fee in respect of any mechanical vehicle crossing the said bridge at the rates specified in the Schedule.

Mode of Collection
of fee

- (3) There shall be provided at either end of a permanent bridge, a cross bar for securing the stoppage of mechanical vehicles.
- (4) The Fee Inspector shall ensure at the cross bar that passage is not allowed to mechanical vehicles unless the fee leviable in respect thereof has been paid.

6. (1) Every driver, owner or person incharge of a mechanical vehicle, required to pay fees under these rules shall before crossing the permanent bridge or after having crossed it stop his vehicle at the cross bar, go to the fee collection booth to pay the fee leviable in respect of the vehicle and obtain from the Fee Inspector a receipt in duplicate in Form-A appended to these rules in token of having paid the fee, before he is allowed to proceed further.
- (2) In the event of two or more permanent bridges falling in close proximity to each other within twenty kilometres from a point at the beginning of the approach of entry of the first bridge to be crossed under the jurisdiction of the same executive agency, the aggregate fees for all such bridges may, if so deemed necessary, be collected from the driver, owner or person incharge of such of the vehicles which intend to cross more than one such bridge, on the first or the last bridge or any of intermediary bridges to be crossed and the vehicle holding the receipt of such a payment shall be allowed to pass through other aforesaid bridges unhindered after showing the receipt to the Fee Inspectors posted on those bridges. Details of such bridges shall be displayed at a conspicuous place near the fee collection booths of the bridges covered under this sub-rule, legibly written or printed in English, Hindi and the regional language of the area in which the said bridges are situated.
- (3) The Fee Inspector shall, on receipt of the fee specified in the schedule, fill up a receipt in triplicate in Form 'A' and deliver two copies thereof to the driver, owner or the person incharge of the vehicle in respect of which the fee has been paid and retain the third in his office. The motor vehicle shall be allowed to go ahead of the cross bar only after the fee has been paid and receipt issued under these rules.
- (4) Where, and if, found necessary, the executive agency may also set up counter-checking booths. For this purpose where such a booth has been set up at some location considered suitable beyond a fee collection booth, after the mechanical vehicle has crossed the bridge and also paid the prescribed fees, the Fee Inspector on counter checking duty at the counter checking booth shall ensure that the mechanical vehicle is allowed to pass from the counter checking cross bar only after verifying or checking the copies of the receipt for payment of the fees from the driver, owner or person incharge of the vehicle.

Remittance of
fees collected

7. (1) The Fee Inspector on duty shall be responsible for the collection and safe custody of the amount collected towards fees during the period of his duty and shall not leave his booth till his reliever takes over from him.
- (2) The Fee Inspector shall maintain a cash register in Form 'B' appended to these rules and keep it posted upto date.
- (3) The Fee Inspector shall at the end of the period of his duty, hand over the amount collected by him to his reliever after obtaining the signature of the latter in the relevant column of the cash register.
- (4) Every day between the hours of 4 and 5 in the afternoon the Fee Inspector on duty shall hand over the entire amount of fee collected during the preceding 24 hours to the Sectional Officer incharge of the

bridge after obtaining his signature in the relevant column of the cash register.

- (5) The Sectional Officer shall keep the amounts of collection received from the Fee Inspector in the chest provided for the purpose at his office.
- (6) The Sectional Officer shall, on every Saturday or if it happens to be a holiday, on the next working day, remit the amount received by him in respect of the week preceding the Saturday by a demand draft to the Pay and Accounts Officer (National Highways), Ministry of Shipping and Transport (Roads Wing), New Delhi. The said Pay and Accounts Officer shall account the amount so received in the relevant receipt head in his books.
- (7) The Sectional Officer shall maintain a register in Form 'C' appended to these rules showing the remittances made to the Pay and Accounts Officer (National Highways), Ministry of Shipping and Transport (Roads Wing), New Delhi and shall keep the register posted upto date.
- (8) The Sectional Officer shall exercise supervision and control over the staff posted at the permanent bridge in connection with the collection of the fees and over the maintenance of proper accounts and records by such staff.
- (9) The Sub-Divisional Officer, incharge of the road on which the permanent bridge is situated, shall check the collection and remittance of fees by the staff in accordance with these rules by paying surprise visits at least twice a month at the offices of the Fee Inspectors and the Sectional Officers-in-charge. He shall countersign the cash register maintained by the Fee Inspectors and Sectional Officers-in-Charge in token of such a check having been made. Such visits shall also be undertaken by the Executive Engineers concerned at least once in three months.

**Submission of
Returns**

8. The executive agency concerned shall furnish to the Pay and Accounts Officer, National Highways, Ministry of Shipping and Transport (Roads Wing), New Delhi every quarter in the first week of July, October, January and April :-
 - (a) a consolidated statement showing month-wise the amount collected and remitted on account of fees proceeds in respect of each permanent bridge along with the details of number and date of the demand draft with which this amount was remitted;
 - (b) break-up of the month-wise expenditure incurred on each bridge by the executive agency required to be reimbursed on account of collection of the fees on the basis of actual expenditure incurred.

**Furnishing of
Security**

9. The Fee Inspector and the Sectional Officer-in-Charge shall each deposit a cash security of not less than Rs 1000/- by executing a security bond in the prescribed form laid down in the Treasury Rules of the Executive Engineer.

**Credit of the
proceeds of the fees
and its utilisation**

10. (1) The proceeds from the fees shall form part of the Consolidated Fund of India and a sum equal to the amount estimated to be received during a year shall be provided in the Demands for Grants of the Ministry of Shipping and Transport for transfer to a non lapsing Reserve Fund not bearing interest within the Public Account of India, to be set up by the Central Government. The amount standing to the credit of the Fund would be allocated by the Government of India for development of National Highways in the States and the Union territories. The amount to be allocated to various States and the Union territories, shall, as far as possible, be equal to the fees collected in the respective States under these rules, reduced by collection charges not exceeding 12% of the total collections within the State. The collection charges shall be reimbursed to the executive agency

concerned in the manner indicated in sub-rule (3) of this rule. The allocations so made to the States and the Union territories shall be over and above their normal plan allocations.

- (2) The allocations so made shall, however, be subject to planning discipline and shall be a Plan expenditure which shall be augmented to the extent of the net proceeds after excluding the collection charges from the proceeds of the levy. The proceeds of the fees remaining unutilised at the end of the Financial year shall not lapse at the close of that financial year but shall be available for being utilised during subsequent years against individual works to be approved by the Central Government.
- (3) Payment of the amounts in reimbursement of the expenditure incurred by the executive agencies on collection of fees, not exceeding 12% of the total collection of fees shall be made by the Government of India by specific payment sanctions from out of the specific budget provision to be made by the Central Government in its budget from year to year.

Assistance by Police

11. All police officers of the area in whose jurisdiction the permanent bridge falls shall be bound to assist the Fee Inspectors, when required in the collection of fees under these rules, and for that purpose, shall have the same power which they have in exercise of their normal police duties.

THE SCHEDULE (See Rule 3)

FEE CHARGEABLE IN RESPECT OF MECHANICAL VEHICLES USING PERMANENT BRIDGES, COSTING MORE THAN Rs. 25 LAKHS ON NATIONAL HIGHWAYS COMPLETED/TO BE COMPLETED AND OPENED TO TRAFFIC ON OR AFTER 1.4.1976 IN REGARD TO VEHICLES OTHER THAN DEFENCE VEHICLES, VEHICLES WITH VIP SYMBOLS, POLICE VEHICLES, FIRE FIGHTING VEHICLES, AMBULANCES, FUNERAL VANS, POSTS AND TELEGRAPH DEPARTMENT VEHICLES AND CENTRAL AND STATE GOVERNMENT VEHICLES ON DUTY.

S. No.	Particulars of Vehicle	Fee for bridges costing more than Rs 25 lakhs and upto Rs 50 lakhs	Fee for bridges costing more than Rs 50 lakhs and upto Rs 100 lakhs	Fee for bridges costing more than Rs 100 lakhs
		Rs	Rs	Rs
1.	Motor Cycle, Scooter or any other two-wheeled mechanically propelled vehicle.	0.50	0.50	0.50
2.	Motor-car, taxi, jeep, pickup van, station wagon, tempo auto-rickshaws, three wheeler scooters, or other auto-driven light vehicles-without trailer	2.00	2.00	2.00
	— with trailer	3.00	3.00	3.00
3.	Bus, truck and other heavy vehicles including truck-trailer combinations			
	— laden with goods/passengers	6.00	8.00	10.00
	— Unladen	3.00	4.00	5.00
4.	Other mechanically-propelled vehicles not mentioned above like mobile cranes, dozers, earthmovers, road rollers, ect. loaded or unloaded	6.00	8.00	10.00

Notes :

- (1) When the same vehicle has to cross the bridge more than once in a day, the user shall have the option to pay one and a half times the above rates while crossing the bridge in the first trip itself.

(2) The following vehicles shall be deemed to be vehicles having VIP symbols :—

President and Vice-Presidents of India, Central and State Ministers, Leaders of Opposition in Lok Sabha/Rajya Sabha/State Legislatures having the status of a Cabinet Minister, Governors/Lt. Governors/Executive Councillors/Speakers/Chairmen of Central and State Legislatures, Foreign dignitaries on State visit to India, Foreign Diplomats stationed in India using cars with CD symbols.

FORM 'A'
(See Rule 6)

R. No. _____

Receipt for payment of fee

Name of Bridge (s) _____

1. Description of mechanical vehicle with Registration Number _____
2. Whether laden or unladen or with or without passengers _____
3. Time and date of outward journey _____
4. Name of driver and/or owner _____
5. Amount of fee paid _____

Signatures of Fee Inspector _____

FORM 'B'
[See Rule 7 (2)]

CASH REGISTER

Serial Number	Date	Vehicle number	Name of person paying the fee	Number of receipt by which fee paid	Amount of fee paid	Progressive figures of fee paid	Signatures of fee Inspector	Signatures of successors fee Inspector	Signatures of Sectional Officer-in-charge	Remarks
1	2	3	4	5	6	7	8	9	10	11

FORM 'C'
[See Rule 7 (7)]

Register showing record of fee collection and remittance on account of fee collected on permanent bridges

Sl. No.	Name of the Sectional Officer in-charge	Amount collected from the fee Inspector (deposited)	Date of Receipt	Name of the Bank from which Demand Draft is purchased	Number of Demand Draft and Date	Amount of Demand Draft	Details of despatch of Demand Draft	Postal Registration No. of despatch of Demand Draft	Remarks
1	2	3	4	5	6	7	8	9	10

114.4
160

No. RW/PL-8 (5)/77

Dated the 15th Dec., 1980

NOTIFICATION

S.O. : In exercise of the powers conferred by section 9 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby makes the following rules to amend the National Highways (Fees for

use of Permanent Bridges) Rules, 1978, namely :—

1. (1) These rules may be called the National Highways (Fees for use of Permanent Bridges) Amendment Rules, 1980.
- (2) They shall come into force on the date of their publication in the Official Gazette.
2. In the National Highways (Fees for use of Permanent Bridges) Rules, 1978, in sub-rule (1) of rule 5, after the word "departmentally", the words "or through private contractor on the basis of competitive bidding", shall be inserted.

114.5
160

No. RW/PL-8 (5)/77

Dated the 10th Dec., 1981

NOTIFICATION

S.O. 6 (E). In exercise of the powers conferred by section 9 of the National Highways Act 1956 (48 of 1956), the Central Government hereby makes the following rules to amend the National Highways (Fees for use of Permanent Bridges) Rules, 1978, namely :—

1. (1) These rules may be called the National Highways (Fees for use of Permanent Bridges) Amendment Rules, 1981.
- (2) They shall come into force on the date of their publication in the Official Gazette.
2. In the National Highways (Fees for use of Permanent Bridges) Rules, 1978 :—
- (a) For sub-rule (2) of rule 6, the following sub-rule shall be substituted namely :—

"(2) In the event of two or more permanent bridges falling in close proximity to each other within eighty kilometres, from a point at the beginning of the approach of entry of the first bridge to be crossed under the jurisdiction of the same executive agency, there shall be levied a fee for one bridge only in respect of all such bridges. The fee shall be collected from the driver, owner or person in charge of such of the vehicle or vehicles which intend to cross more than once such bridges, on the first or the last bridge or any of the intermediary bridges to be crossed and shall be allowed to pass through other bridges after showing the receipt to the Fee Inspector posted on the bridges.

Details of such bridges shall be displayed at a conspicuous place near the fee collection booths of the bridges covered under this sub-rule, legibly written or printed in English, Hindi and the regional language of the area in which the said bridges are situated".

- (b) In the Schedule, for foot-note (1) the following foot-note shall be substituted namely :—

"(1) When the same vehicle has to cross the bridge more than once in a day, the user shall have the option to pay one and a half times the above rates while crossing the bridges in the first trip itself, or if the vehicle has to use a bridge continuously and quite frequently for the entire month or even beyond that, for much longer period, the vehicle owner can even have a monthly pass on the payment of charges equal to 30 single rates".

Notes : —

- (i) The principal rules were published in the Gazette of India (Extraordinary) Part II Section 3-Sub-Section (ii) dated 8th December, 1978 vide S.O. NO. 718 (E).
- (ii) Amendment published in Gazette of Indian (Extraordinary) Part II Section 3-Sub-Section (ii) dated 5th January, 1981 vide S.O.No. 11 (E).

121.2 DIRECTIONS ON PROJECT PREPARATION & CO-ORDINATION BETWEEN ROADS & BRIDGES

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>121.2.1</u> (1100)	WI-48 (18)/52 dt 10.7.57	Construction of new Rail and Road Bridges	See code No. 1100
121.2.2	WI-43 (16)/65 dt 22.11.65	Instructions that estimate & alignment plans should be forwarded through Stae Govts.	121.2/1
<u>121.2.3</u> (302, 500)	NHI-37 (2)/70 dt 2.4.70	Plan for development of National Highways	121.2/1
<u>121.2.4.</u> (121.4)	NHI-46 (5)/70 dt 28.7.70	Works on NHs and on roads other than NHs financed wholly or partly from central funds	121.2/4
<u>121.2.5</u> (1100)	PL-2 (1)/70 dt 18.1.71	Bridge project preparation	See code No. 1100
<u>121.2.6</u> (302, 1100)	NH-40 (3)/71 dt 29.1.71	Siting of bridges and fixation of alignment of approaches	121.2/5
121.2.7	SR-6 (7)/71 dt 11.6.71	Works on NH & other centrally financed roads	121.2/6
<u>121.2.8</u> (130)	NHIII-33 (28)/72 dt 16.6.72	Forwarding of estimates and tenders for NH works-Instructions Reg.	121.2/6
<u>121.2.9</u> (192)	NHIII/Misc/178/73 dt 3.9.74	Compliance of technical notes accompanying sanctions to the estimates.	121.2/7
<u>121.2.10</u> (1100, 301)	NHII/Misc/12/75 dt 2.7.75	Level surveying for NHs Ref. to GTS Bench Mark	See code No. 1100
<u>121.2.11</u> (1100)	NHIII/Misc/120/75 (i) dt 20.3.76	Estimates for construction of bridges on NHs & approaches thereto Submission of	121.2/7
<u>121.2.12</u> (1100)	NHIII/Misc/120/75 dt 20.3.76	Coordination between construction of bridges and their approaches	121.2/7
121.2.13	PL-67 (12)/76 dt 10.9.76	Fixation of guideline for new road/existing roads proposed to be raised	121.2/8
<u>121.2.14</u> (1100)	PL-67 (35)/76 dt 14.1.77	Construction of bridge across Irrigation Canal & distributaries on NHs	See code No. 1100
<u>121.2.15</u> (1100, 500)	NHIV-50 (20)/77 dt 27.9.77	Fixation of deck level of bridges & culverts	121.2/9
<u>121.2.16</u> (1100)	NHIII/P/30/77 dt 19.10.77	Need for co-ordination between the construction of bridges and their	121.2/10

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
		approaches for the completion of both the components simultaneously	
<u>121.2.17</u> (121.5)	NHIII/P/31/77 dt. 28.10.77	Preparation of detailed project estimates for NH (R & B) works—Avoidance of revision	121.2/10
121.2.18	DO No. NHIII/P/31/77 dt. 28.12.77	Proper framing and scrutiny of estimates before submitting the same to the Ministry	121.2/11
<u>121.2.19</u> (1100)	NHIII/P/30/77 dt. 25.2.78	Requirement for integrated project planning for construction of bridges on adjacent streams with overlapping catchment and approaches to the same	See code No. 1100
<u>121.2.20</u> (301)	NHIII/P/31/77 dt. 31.5.78	Survey, investigation, project preparation etc. for NH (R) works references	121.2/11
<u>121.2.21</u> (1100)	NHIII/P/31/77 dt. 31.5.78	Survey, investigation & preparation of bridge projects—references	See code No. 1100
<u>121.2.22</u> (1100)	NHIII/P/5/77 dt. 13.7.78	Co-ordination with Irrigation—Realignments	121.2/13
<u>121.2.23</u> (1100)	NHI/Misc/84/78 dt. 1.3.79	Construction of bridge projects on NHs—Coordination with other department Reg.	See code No. 1100
<u>121.2.24</u> (1100)	NHVI/Misc/25/79 dt. 11.7.79	NHs & other centrally sponsored works—Irrigation Dams-R & B affected	See code No. 1100
121.2.25	DO F. 1 (8)/PF-II/80 dt. 31.5.80	Avoidance of Revision of Estimates	121.2/14
121.2.26	NHIII/P/10/80 dt. 23.8.80	Avoidance of Revision of Estimates	121.2/15
<u>121.2.27</u> (1100)	NHIII/P/30/80 dt. 6.10.80	Reconstruction of weak and narrow bridges—Data to be furnished	See code No. 1100
<u>121.2.28</u> (121.5)	NHIII/P/10/80 dt. 30.12.80	Preparation of detailed project estimates for NH (R & B) works—Avoidance of revision	121.2/15
121.2.29	NHIII/P/17/79 dt. 5.3.81	Widening of narrow roads and bridges—Need for simultaneous completion	121.2/16
121.2.30	RW/NHIV-2 (2)/81 dt. 31.10.81	Simultaneous action in respect of Minor Bridges and their diversion roads	121.2/16
121.2.31	RW/NHIII/P/5/83 dt. 18.5.83	Scrutiny of estimates pertaining to NHs and other centrally sponsored works	121.2/17

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>121.2.32</u> (141)	NHIII/Coord/37/84 dt. 5.4.84	Recommendations of Vohra Committee-Prior sanction for land acquisition estimates	See code No. 141
121.2.33	NHIII/P/9/84 dt. 19.4.84	Recommendation of Vohra Committee suggesting sanction of works lapse after two years instead of five years	121.2/17
121.2.34	PL-80 (68)/82 dt. 2.5.84	Guidelines for preparation of World Bank projects	121.2/18
<u>121.2.35</u> (204)	NHII/Coord/30/84 dt. 11.10.84	Fixing up realistic time targets for each project	See code No. 204
<u>121.2.36</u> (121.6)	NHIII/Coord/34/84 dt. 24.3.84	Recommendations of Vohra Committee reg. NH works costing less than Rs 10 lakhs for which administrative approval is accorded	See code No. 121.6
121.2.37	NHIII/Coord/34/84 dt. 12.12.84	—do—	121.2/19
<u>121.2.38</u> (1100)	NHIII/P/31/77 dt. 10.1.85	Bridge works costing more than Rs 10 lakhs each on NHs & other centrally financed schemes-Modified procedure for submission of detailed estimates of cost thereof	See code No. 1100
121.2.39	NHIII/P/31/77-Pt. dt. 14.1.85	Preparation of technical proposals for road works included in the Annual Plan	121.2/20
<u>121.2.40</u> 7520	NHIII/Coord/86/89 dt. 25.3.85	Improving quality of project preparation	121.2/23
<u>121.2.41</u> 160	PL-23 (1)/77 dt. 20.5.85	Provision of construction of Toll Plazas	See code No. 160

No. WI-43 (16)/65

Dated the 22nd Nov., 1965

To,

All State Govts./Administrations except Tripura & Andaman & Nicobar Islands
(Dep'ts. dealing with roads)

Copy of letter No. WI-43 (16)/65, dated the 22nd November 1965, from the Under Secretary to the Government of India, Ministry of Transport and Shipping (Roads wing), Transport Bhavan, No. 1, Parliament Street, New Delhi-1, and addressed to the All State Governments/Administrations except Tripura and Andaman and Nicobar Islands (Departments dealing with roads).

Subject : Instructions that estimates and alignment plans for new roads on National Highways should be forwarded through the State Governments

I am directed to say that it has been noticed that the estimates for works on National Highways and the alignment plans for new roads or diversions on National Highways are being received in this Ministry direct from some of the State Chief Engineers and no reference in the matter is received from the State Government. This practice is not in order.

2. In order to have a uniform policy in the matter, it is requested that the estimates for National Highways works requiring the technical approval and financial sanction of the Government of India and the alignment plans for new roads or diversions on National Highways may be forwarded to the Government of India by the State Government with their recommendations. There is however, no objection to an advance copy of such reference being forwarded to the Consulting Engineer (Road Development) by the State Chief Engineer direct.

No. NHI-37 (2)/70

Dated the 2nd April, 1970

121.2.3

302
500

To

The Chief Engineers of All States P.W.Ds., and Union Territories,
(dealing with roads)

Subject : Plan for the development of National Highway during 1970-71

I am directed to invite attention to para 4 of this office letter of even number dated the 30th March, 1970, wherein it was emphasised that while framing detailed proposals for the current year, care should be taken to see that improvements to geometrics such as the easing of sharp curves, removal of humps, widening and reconstruction of weak and narrow culverts etc. are, to the extent possible and feasible, simultaneously effected with the widening and strengthening of pavements. This was suggested so as not only to ensure smoother and comparatively hazard-free flow of traffic at near about design speed in the widened sections but also to obviate infructuous expenditure which may result on account of any subsequent realignment of these.

2. For guidance in preparing proposals in this respect two Memoranda (one dealing with road works, at Annexure I, and the second dealing with bridges works, at Appendix II) are enclosed herewith. These Memoranda refer to the geometric design standards which should be followed for preparing various proposals and reiterate other points of good engineering practice that have been advocated by this office from time to time.
3. It is requested that the points of guidance spelled out in these Memoranda may be kept in view while framing detailed estimates/proposals in respect of works included in the Annual Plan for 1970-71 and also, till further notice, in respect of any future works to be undertaken on the National Highway system.

MEMORANDUM ON THE PREPARATION OF PROJECTS FOR NEW CONSTRUCTIONS IMPROVEMENTS TO EXISTING SECTIONS OF NATIONAL HIGHWAYS IN RESPECT OF ROAD WORKS :

Introduction

1. Almost all of the present National Highways have graduated from local roads/old trails of pre-automobile area which were grossly deficient in geometrics. These roads were meant essentially for slower traffic and their carrying capacity for fast traffic was limited. With a steep rise in the volume, speed and size of fast moving vehicles over the years, demand on these sections of the National Highways has increased manifold, making it necessary that the inherited deficiencies may be rectified as soon as possible. However, inspite of some improvements already having been made, considerable leeway in this regard still remains to be made.
2. It is envisaged that during the Fourth Plan period a large scale strengthening and widening of the National Highways pavements will be taken in hand. A beginning in this direction has, in fact, already been made with the Annual Plan for 1969-70. It is the objective that on completion of this programme the National Highways would, as far as possible, be able to fully cater to the speed, comfort and safety requirements of the increased traffic. To achieve this objective it is imperative that improvements to geometrics, where feasible, and to the extent economically practicable, should be planned concurrent with the other improvements like thickening and widening of the crust, raising of the road above flood level etc.

Existing Deficiencies

3. Most of the sections where pavement improvements are contemplated, or are already underway, possess a number of narrow/weak culverts. These will act as hazardous features once the widening and improvement of riding surface has taken place and the traffic volumes and speeds have risen as a result thereof. Therefore, there is much in favour of looking into the culvert requirements at the same time as other improvements are planned and projecting the same simultaneously.
4. Similarly substantial deficiencies of geometrics like substandard radii, insufficient superelevation, lack of transitions at the ends of circular curves, insufficient sight distances at both horizontal and vertical curves and uneven profile, abound in a majority of length of the National Highways. If any of these lengths is included in the current programme of widening/strengthening without regard to the basic defects of geometrics and alignment, the expenditure could very well turn out to be infructuous as at a later date the alignments may again have to be improved at extra cost. In some cases the previous alignment of the road may have subsequently to be altogether abandoned. Improvement to geometrics will become imperative from traffic safety considerations also when a road is being widened, as after widening speeds of vehicles will tend to rise. In order, therefore, that optimum use is made of the meagre resources available it is very essential that all such deficiencies be carefully located and a complete inventory of these made out. Attempt may then be made to submit estimates for improvement in respect of these geometrics deficiencies in a package alongwith the estimates for widening/strengthening of the existing carriageway. This is a golden opportunity for ridding the National Highway system of its in built deficiencies which must not be allowed to slip.

Geometric Design Standards

5. As an aid to the planning of geometric improvements, a summary list of the currently applicable geometric design standards for use on National Highway projects has been compiled and is enclosed as an Annexure to this Memorandum for information.
6. The standards indicated are intended to be utilised more or less as general design controls. Where conditions are favourable and costs not excessive it will usually be worth while to go in for even some what more liberal values of the design parameters than the ruling values specified. It is realised, however, that in constrained situations, problematic terrain and like circumstances, more so when the case is of improving an existing highway, it may not always be found economical to adopt the standards recommended to the full extent and proper judgement will require to be exercised after careful study of the survey and investigation data.
7. The guiding principle should, however, be that economy may be practised on some feature other than the principal geometric features. In a pavement of flexible construction it is always possible to carry out strengthening at a future date when finances permit. Improvement of surface type or provision of hard shoulders are also features with which the designer can play. Like-wise widening of comparatively light trafficked roads should be deferred for some time or substituted by hard shoulders without any great loss to the road-users. All these features permit stage construction and could be attended to progressively according to the availability of funds. But the geometric features of the alignment, grade and sight distance defy such a treatment. When once moulded into the landscape and tied down by the right-of-way and surfacing these are most difficult and expensive to correct except at an exorbitant cost later. The problem comes most sharply into focus in the case of existing highways, more specially the National Highways.
8. A careful study of the existing alignments and their geometric features, therefore, merits high priority so that an attempt could be made, within reasonable limits, to provide for improvements conforming as far as practicable and feasible to the geometric standards listed in the Annexure. The standards should be applied like-wise to construction of missing links, bypasses, realignments, under-or over-bridges replacing level crossings etc. where limitations as in the case of existing sections would not be present.

Points to be especially kept in view

9. The following points may be especially kept in view during investigations and preparation of the detailed estimates for proposed improvements to the different National Highway sections :
 - (a) **Horizontal Alignment**
 - (i) Where it is planned to improve radii of the curves this should not be done on a piecemeal basis but by proper study of

the whole alignment. In this way not only large-scale reconstruction will be avoided but an overall smoothness of the alignment brought about.

- (ii) It should usually be possible to eliminate minor kinks in a seemingly straight road by suitable adjustments of the centre line of the road, without going in for a major realignment. Extra cost involved in these corrections will not be more than marginal.
- (iii) Where it is not practicable for any reason to improve sharp radii it should in any case be ensured that the superelevation provided is as per standards.
- (iv) It has been generally noticed that circular curves lack in requisite transitions at their ends. It should be possible to remedy this at little extra cost while improving the appearance and utility of the National Highways many times.
- (v) Sight distance on the inside of curve has often been found insufficient because of presence of a variety of obstructions. All possible attempts should be made to remove these obstructions so that the visibility conditions are adequate for fast traffic.

(b) *Vertical Profile*

- (i) Where properly designed vertical curves have not been provided at changes of vertical alignment a careful study should be made to find out the most economical solution so that the standards laid down are satisfied.
- (ii) It is appreciated that it may not always be possible to design curves for overtaking sight distance but efforts must be made to achieve designs fit for at least the safe stopping distance.
- (iii) Correction of minor undulation in the road surface and provision of shock-free entry at humps and dips can usually be accomplished at marginal costs.

(c) *Raising of road on account of Flooding/Water-logging Conditions*

- (i) There are instances where an existing section gets submerged owing to flood waters or is located in water-logged conditions so that its performance is not satisfactory. Before framing proposals for strengthening/widening of such sections it will be necessary to consider raising the formation so that the sub-grade is atleast 2 ft. above the Higher Flood Level, or in the case of water-logged conditions to consider raising the formation to suitable level above the subsoil water level/adopting other recommended measures against waterlogging.
- (ii) While formulating raising proposals consideration should be given to the effect of raising on the adjoining sections of the highway. It will be advisable to work out an integrated Plan for long continuous sections than devising piecemeal proposals for short lengths.
- (iii) Where raising of the formation is proposed attention will have essentially to be paid to the provision of requisite cross-drainage facilities for cross flow of flood waters.

(d) *Bypasses/Realignments*

In the case of bypasses/realignments it should be ensured that no kinks results at the two ends where these sections rejoin the existing highway. This is easily possible by an over all study of the plans and preplotting so that a smooth flowing alignment results.

(e) *Culverts*

- (i) It has been emphasised above that while planning improvements to existing sections cases of weak and narrow culverts should be given due consideration. Proposals sent by the States may, therefore, include widening of such culverts as are narrower than 32 ft. or so and of strengthening those which are weaker than for Class 18 loading.
- (ii) Humps over the existing culverts should be evened out by providing shock-free transition curves. Deficiencies of sight distance should also be corrected.
- (iii) Where culverts occur on a gradient or horizontal curve their top levels should be so fixed that the culverts fit in with the profile of the flanking portions of the road and there is no resulting hump.

Flexible Pavement Design

- 10. As regards design of flexible pavements, the basis of proposals should be the 'Guidelines for Design of Flexible Pavements', now in final stage of adoption by the Indian Roads Congress a copy of which has been circulated to all the State Chief Engineers in connection with the Indian Roads Congress Council meeting to be held at Darjeeling from the 5th to 7th April, 1970. All relevant data such as the existing traffic, depth of water table, type of sub-grade soil and its C.B.R. value, thickness and composition of the existing crust etc. should invariably accompany the estimates in case of strengthening scheme.

Estimates

- 11. As far as possible detailed estimates should be prepared for convenient sections about 20 to 25 miles in length or less if so defined in the list of works for Annual Plan. Under each estimate there should be detailed sub-estimates for :
 - (i) Improvements to geometrics;
 - (ii) reconstruction/widening of existing culverts; and
 - (iii) widening and/or strengthening of the carriageway.

Annexure to Appendix I

Geometric Design Standards for the Design of National Highways

Note : Not reproduced as IRC standard on geometric design has since been published. Refer to Ministry's Circular letter No. NH III/P/31/77 dated 31.5.78 and IRC : 73-1980

MEMORANDUM OF THE PREPARATION AND SUBMISSION OF BRIDGE ESTIMATES

The preparation of estimates for Major Bridges and their design is dependant on the collection of required hydraulic and other data, selection of suitable bridge sites, soil investigations including boring data at the most suitable and finally selected bridge site etc. It is expected that the necessary steps in this direction will be taken immediately in case of bridge works included in the Annual Plan 1970-71, wherein these investigations have not so far been carried out.

2. While selecting the most suitable bridge site, the economic aspects of the proposal as a whole i.e. the bridge including its approaches, may be kept in view. Further, due importance may be given to the geometrics and other features of the approach road in the selection of the bridge site and the orientation of the bridge axle.
3. While forwarding the bridge project, separate detailed estimates for bridge proper and of connected road approaches may kindly be sent together to enable this Ministry to take steps to accord sanction simultaneously for the bridge proper and its approaches. This will enable the State Governments to take up the construction and to fix targets of completion accordingly so that both the bridge and approaches get completed at the same time. This is very necessary for obvious reasons.
4. In respect of bridges with individual span lengths of 25 metres (80 ft.) or less and overall length of the bridge not more than 5 spans of 25 metres (or 400 ft. length approx.) tenders will have to be only on item rate basis on departmental designs as per decision arrived at in the Chief Engineers meeting held in October, 1969 at Kulu. Hence, for such bridges, apart from detailed estimates, detailed designs will also have to be submitted along with the estimate. As standard designs of superstructures of various span lengths prepared in this Ministry are available with the State Chief Engineers, these may be adopted as far as possible.
5. For other bridges also detailed estimates will have to be prepared, but tenders for these can be invited on lumpsum basis, both for the departmental outline design as well as the tenders on alternative design.
6. Further, it will be helpful if all the estimates of minor bridges for a particular section of the road, included in the Annual Plan, are prepared and sent together. This will facilitate their handling and processing in this Ministry as these can be sanctioned with advantage against one Job No.

121.4

No. NHI-46 (5)/70

Dated the 28th July, 1970

Subject :— Works on *National Highways* and on roads *other than National Highways* financed wholly or partly from central funds

I am directed to request that in order to enable this Ministry to process expeditiously for sanction the estimates for various works on National Highways and roads other than National Highways financed wholly or partly from Central funds, information in the enclosed proforma and a plan of the area in which the work is to be executed may be sent alongwith the detailed plans and estimates in respect of each work.

Enclosure to letter No. NH I-46 (5)/70 dt. 28.7.70

PROFORMA

- (a) Proposal in brief
- (b) Extent of preliminary investigation done
- (c) Broad features showing the existing position and the improvements desired
- (d) Traffic data
- (e) Duration of execution
- (f) Phasing of expenditure and also physical performance
- (g) Estimate of cost together with break up under broad headings, such as, in the case of roads works
 - Land acquisition;
 - Earthwork:
 - road material,
 - cross drainage works,
 - and in regard to bridge works
 - foundations;
 - superstructure;
 - guide bunds, etc.
- (h) Particulars relevant for comparison of cost of this and some other similar works carried out in the same region
- (i) Special features, if any.

No. NHI-40 (3)/71

Dated the 29th January, 1971

To

All the Chief Engineers,
(dealing with roads)

Subject : Siting of bridges and fixation of alignment of approaches thereto on National Highways and other Centrally financed road projects.

It has been observed that while fixing sites for highway bridges, due consideration is sometimes not given, to the geometrics of the approach alignments. Besides, there is lack of coordination in the work of project preparation for bridges and their approaches, resulting in frequent timelags between their execution and completion. This sometimes results in higher costs and a definite loss to the exchequer on account of non-utilisation of the facility till the bridge and the approaches thereto are finally completed and opened to traffic. There is thus an urgent need for a greater coordination in the matter of planning, design and execution of both components of the projects with a view to achieving overall economy, sound engineering results and speedy completion of the entire job.

2. While it is recognised that route selection for a highway is influenced by the sites of bridges in the case of large rivers, it is generally not so in the case of smaller bridges upto a length of 1000 ft. or so, unless there are any special problems. For achieving overall economy consistent with sound engineering in any highway scheme, it is, however, essential to blend suitably the requirements of both road and the bridge components of the project. The following broad principles consistent with the overall economy for the siting of bridges and their approach alignments are suggested for guidance in this regard :

- (i) In the case of large bridges of length more than 1000 ft., the hydraulics and other design considerations for the bridge and its training works etc. would generally govern **site selection** and the alignment of the approaches would be adjusted to suit, keeping in view need for suitable geometrics.
- (ii) In the case of medium bridges of lengths 200 to 1000 ft., collective consideration of requirements of both proper road alignment for approaches and bridge design would determine **site selection**. While in the case of bridges of lengths nearer the upper limit of the range, the hydraulic and other **design** considerations of the bridge may be given greater weightage in the selection of the site, the **geometrics** of the road **alignment** should generally govern a decision about the selection of the site in the case of bridges of lengths nearer to the **lower** limit of the range, unless there are any special problems of bridge design.
- (iii) In the case of small bridges of lengths below 200 ft. **road alignment** would essentially govern site selection unless there are any special problems of bridge design.

3. In the case of all bridges of length 200 ft. and above, it would be necessary to carry out a reconnaissance survey of the area and prepare preliminary report on the location of the bridge and its approaches explaining the pros and cons of the various alternative proposals, together with comparative rough cost estimates, to be forwarded in duplicate for the consideration of this office with one copy to its regional officer. After the preliminary report has been examined in this office, the states would be suitably advised to conduct necessary detailed investigations for the final selection of the bridge site and alignment of approaches. Before finally deciding upon the bridge site and the alignment for approaches thereto, it may be necessary for the officers of the Roads and Bridges Directorate of this Ministry to make a joint inspection of the site (s) on the basis of the investigations carried out by the State. As in the case of medium and large bridges, it would be necessary to prepare and submit to this office preliminary reports together with rough estimates of cost for bridges of lengths less than 200 ft., also for according approval to bridge sites and alignments of approaches thereto. In such cases, the site inspections would be made, where necessary, by the Regional Officers or when so required by an officer of the Roads Directorate of this Ministry.
4. After the bridge site and the alignment of approaches thereto have been finally selected, detailed plans and estimates for the project may be prepared and forwarded to this office for obtaining technical approval and financial sanction of the Government of India. These estimates which would include both bridge and its approaches should be prepared in two parts one comprising bridge proper with protective works, where necessary, and the other for approaches.

5. It is requested that the above procedure may please be followed in future while forwarding proposals for bridges and approaches thereto on National Highways and Centrally financed road projects in your charge.

Copy to all the Regional Superintending Engineers/Engineer Liaison Officers.

Copy to all Technical Officers/Secretariat Sections in the Roads Wing for information and future guidance.

On receipt of the preliminary project report as in para 3 above, each shall simultaneously be examined in the Roads and Bridges Directorates for arriving at a coordinated decision by mutual consultation governed by considerations laid down in para 2 of the circular. Similarly on receipt of the final detailed project estimates as in para 4, the concerning components shall be examined in the Roads and Bridges Directorates simultaneously and thereafter as far as possible shall be collectively processed for financial sanction, separate processing being resorted to only sparingly where so held necessary by both Chief Engineer, Roads and Bridges concerned.

121.2.7

No. SR-6 (7)/71

Dated the 11th June, 1971

To

The Secretaries of all State Governments and union Territories
(Departments dealing with roads).

Subject : Works on National Highways and on roads other than National Highways financed wholly or partly from central funds

In continuation of this Ministry's letter No. NHI-46 (5)/70, dated the 28th July, 1970, I am directed to request that the following additional information may also be supplied, along with each such estimate as is sent to this Ministry for widening and/or strengthening of National Highways or roads other than National Highways financed wholly or partly from central funds :

- (a) When the road length to be strengthened and or widened, was last improved.
- (b) The expenditure that had been incurred on that improvement.

121.2.8

No. NHIII-33 (28)/72

130

To,

Dated the 16th June, 1972

All the State Governments etc.,
(Depts., dealing with roads)

Subject : Forwarding of estimates and tenders for National Highway works-Instructions regarding.

I am directed to say that it has ben noticed for sometime past that the estimates for National Highway works are at times received direct from the State Chief Engineers and in some cases no references are received from the State Governments in the matter. In this connection attention is invited to this Ministry's letter No. WI-43 (16)/65, dated the 22nd November, 1965 laying down the procedure for forwarding of estimates. It has further been noticed that tenders for National Highway works are also received from the State Chief Engineers direct. This practice is not in consonance with the prescribed procedure.

2. I am to request that necessary instructions may kindly be issued to all concerned to ensure that estimates and tenders in respect of National Highway works are forwarded to this Ministry by the State Governments. There is, however, no objection to advance copies of such references being forwarded to the Director General (Road Development) by the State Chief Engineers concerned.

No. NHIII/MISC/178/73

Dated the 3rd Sept. 74

To,

All State Govts/Depts. dealing with
Roads/National Highways.

Subject : Compliance of Technical Notes accompanying Sanctions to the estimates

I am directed to say that while according technical approval and financial sanction to projects generally a number of stipulations and suggestions are made in the Technical Notes attached to the sanctions. The State Governments who are executing the National Highways projects as agents of the Central Government, are expected to attend to the stipulations/suggestions contained in the Technical Notes immediately on receipt of the sanction and positively, in any case, before commencing the execution of the concerned items of work and intimate implementation action taken there on to this Ministry. It is an important requirement and needs prompt and timely attention.

2. I am to request that instructions may kindly be issued to the State Chief Engineers concerned to take particular care in attending to this aspect to ensure prompt and timely compliance with of this important requirement. They may also be requested to state clearly, while forwarding the progress reports to this Ministry, that the stipulations made in the Technical Note, accompanying the Technical/Financial Sanction have been, or are being complied with.

No. NHIII/MISC/120/75 (i)

Dated the 20th March 76

To,

All State Governments
(Departments dealing with Roads)

Subject : Estimates for construction of bridges on National Highways and approaches thereto — Submission of

I am directed to say that at present no set procedure is being followed by the State Governments for submission of estimates to this Ministry regarding construction of bridges on National Highways and approaches thereto despite the requirement having been specifically and stressingly emphasised in this office letter No. NHI-40 (3)/71, dated 29.1.1971, addressed to the State Chief Engineers, attention being invited to paragraphs 1 and 4 thereof. While in some cases a combined estimate both for the bridge proper and its approaches has been forwarded to this Ministry, in other cases estimate for bridge only has been sent in the first instance. This has resulted in delays in the sanction of estimates for approaches. A number of instances have come to the notice of this Ministry where the construction of a bridge has been completed but it has not been possible to commission the bridge into service because the approaches thereto have not been completed. In a few cases, even the estimates for approaches have not been received from the State Government although the bridges have been completed. In order to avoid recurrence of such cases and to ensure that entire project of construction of the bridge and its approaches is proceeded with in a well-coordinated manner, it has been felt necessary to emphasise again that henceforth the State Governments should send to this Ministry a separate estimate for bridge work, (including its training/protective works) and a separate one for approaches thereto but these should be forwarded simultaneously and under the same covering letter. Estimates which do not meet with this requirement will be returned to the State Government.

D.O. No. NHIII/MISC/120/75

Dated the 20th March, 1976

To,

All Chief Engineers from DG (RD) by Name

Subject : Need for coordination between the construction of bridges and their approaches for the completion of both the components closely the same time

Your urgent personal attention is invited to this Ministry's earlier letter No. NHI-40 (3)/71 dated 29.1.1971, on the above mentioned subject, a copy of which is enclosed for ready reference again,

attention to paragraphs 1 and 4 thereof being specially invited. A number of instances have come to our notice where the construction of a bridge has been completed but it has not been possible to commission the bridge into service because the approaches thereto have not been completed so far. Such cases invited a lot of criticism from the public. You will appreciate that this is not a happy situation and all out efforts are required to be made to ensure that for the completed bridges, the work of approaches is expedited so as to derive full benefit of the investments already made in the construction of bridges. In fact, this Ministry and its Regional Officers have been drawing attention of the State authorities from time to time towards the need for a coordinated handling of these works. This matter was also brought up for discussion in the Chief Engineers' meeting held in March, 1975, at the meeting of the T.D.C. and its standing committee on Roads held at New Delhi in June, 1975 and recently at the last Chief Engineers' meeting held at Hyderabad on 6th January 1976. I am writing this letter to you in order to emphasise once again the need and urgency of getting the incomplete approaches completed with the utmost expedition.

2. A review of the bridges for which approaches have not been completed/constructed so far was recently undertaken by us in consultation with our Regional Officers in order to analyse the reasons for the delay in the completion/construction of the approaches so as to devise ways and means to remove the bottlenecks if any. The main reasons for non-completion/construction of the approaches brought to our notice relate to problems of land acquisition, non-availability of funds, non-receipt sanction of the estimates, abandonment of work by the contractors, rectification of sub-standard work in bridge/approaches, and lack of co-ordinated efforts. In order to get over these bottlenecks, following suggestions are made for implementation :—

- (i) Land should be acquired expeditiously by resorting to emergency procedure under the Land Acquisition Act, where delay by the normal procedure is anticipated.
- (ii) Funds for the work relating to bridge approaches which have lagged behind should be earmarked on top priority from the allocations made to the State and the approaches completed within the current financial year or latest before the onset of the next monsoons. Funds should be allocated in such a manner so as to ensure a well-coordinated progress of work both on the bridge proper and its approaches.
- (iii) The cases where estimates have not been submitted to this Ministry or where the estimates have not been sanctioned so far for want of further data from the State, should be pursued by you personally and necessary action taken promptly to avoid any further delay. The position in such cases should be reviewed every month.
- (iv) In order to avoid delay in the sanction of estimates for approaches in future, it has been decided that State Governments should henceforth send separate estimates for bridge works and approaches but these should be forwarded to the Ministry simultaneously and under the same covering letter. Any project not complying with this requirement will be returned to the State Government.
- (v) In the quarterly progress report for bridge proper, the progress about the work relating to approaches should also be reported briefly, and vice versa. The proforma for quarterly progress reports are being amplified accordingly to meet with the above requirement and a separate communication will follow in this connection shortly.
- (vi) Where work is undertaken or required to be undertaken for rectification of sub-standard work for the bridge or its approaches, needful should be done immediately so that the investment is brought to fruition at the earliest. A report to this effect should be sent to the Roads Wing after having the requirement covered expeditiously.
- (vii) In cases where the contractors are going slow or have abandoned work, the problem should be sorted out expeditiously and the position reported to this Ministry within a month of the date of issue of this letter.

3. A statement giving particulars of the bridges in the State of — for which approaches have not been completed/constructed so far is enclosed. Any omissions of such cases of approaches not completed, may also be located by you and got added to the list. It is requested that the reasons for the delay in the completion/construction of the approaches may please be analysed and reported to us and action taken immediately in the light of suggestions as in para 2 above. A report about the action taken to remove the various bottlenecks may please be sent to me within a fortnight of the receipt of this letter.

Note Encls. not attached

121.2.13

No. PL-67 (12)/76

Dated the 10th September 1976

To.

Chief Engineers/Addl. C.Es of State PWDS/Union Territories

Subject : Fixation of grade-line for new roads/sections of existing roads proposed to be raised

An important consideration in the design of new roads, or the raising of existing sections due to submergence, is the fixation of grade-line with reference to HFL or the water table. Present

instructions of the Ministry contained in circular letter No. NHI-36 (2)/70 dated the 2nd April, 1970, are that the subgrade should be kept at least 2 ft. above the HFL and in the case of water-logged conditions, due consideration should be given to the raising of formation to a suitable level above the subsoil water level as well or adoption of other recommended measures against water-logging.

2. Since, National Highways occupy a key position in the country's road network, and it is desirable to keep these open to traffic with least disruption, in modification of the earlier instructions it has now been decided that the subgrade level on new roads or sections proposed to be raised should be kept at least one metre above the HFL. Where waterlogging conditions apply, after careful examination of the involved factors, the embankment should be raised to a suitable level above the water table as well, and other measures such as deep drains/capillary cutoffs adopted on the lines of IRC : 34-1970 "Recommendations for Road Construction in Water-logged Areas" so that the subgrade is not saturated due to capillary action.
3. In fixing the design HFL, care should be given to the possible rise in water level due to such factors as the embankment of the road itself, constriction of the waterway at bridges, and gradual accretion of water level because of siltation of the drainage courses. Where submersible section of an existing road is to be raised, additional cross drainage facilities should be provided, as required, so that cross flow of flood waters is assured without any heading up.
4. In general, when raising proposals are formulated, effect on adjoining section of the highway should also be simultaneously considered. It will be advisable to frame an integrated plan for a stretch of reasonable length than designing piecemeal proposals for short sections.
5. It is requested that these instructions may please be brought to notice of all officers in your department dealing with National Highways.

121.2.15
1100
500

No. NHIV-50 (20)/77

Dated the 27th Sept. 1977

To,

The Chief Engineers/Addl. Chief Engineers' of the
State P.W.Ds and Union Territories
(dealing with National Highways)

Subject : Fixation of the deck level of High Level bridges and culverts across cross drainage for National Highways

The deck levels of high level bridges and culverts are generally fixed after allowing for the necessary vertical clearances in accordance with the provisions contained in Clause 106 of I.R.C. Bridge Code Section I. This, in some cases, may result in the deck levels as worked out being lower than the finished road formation level of the approaches, arrived at after allowing for the necessary vertical clearance of 1 metre for the subgrade level above the designed H.F.L., in accordance with para 2 of this Ministry's circular letter No. PL-67 (12)/76 dated 10th Sept. 1976.

2. In order to ensure that such abrupt changes in longitudinal profile of the road are avoided, it has now been decided that in all such cases, the bridge or culvert deck levels shall be raised to be in line with the finished adjoining road formation levels, and in no case should the clearance above the affluxed H.F.L. to the top of finished deck level be less than 1.76 metres. This is also subject to the minimum free board requirement above the affluxed HFL to the bottom of deck as specified in Cl. 106 of Section I of IRC Bridge Code being duly satisfied.
3. These instructions shall be kept in view while preparing proposal for new bridges and culverts and wherever possible may be incorporated in all other cases which have yet not been put to tender.
4. These instructions shall, however, not apply to cases where the finished road formation level has been kept higher from other considerations e.g. bridges on valley curves/bridges, over-bridges and under-passes, etc.
5. It is requested that these instructions may be brought to the notice of all officers in your Department dealing with National Highways.

No. NHIII/P/30/77

Dated the 19th Oct. 1977

To,

All the State Governments
(Deptt. dealing with roads)

Subject : Need for coordination between the construction of bridges and their approaches for the completion of both the components simultaneously

I am directed to invite your attention to this Ministry's letter No. NHIII/Misc/121/75 (i) dated 20th March 1976 and also to (U) D.O. letter No. NHIII/Misc/120/75 dated 20th March 1976 addressed by Director General (Road Development) & Addl. Secretary to all the State Chief Engineers, with copies endorsed to the State Govts. wherein the need for maintaining closer coordination between the construction of bridges and their approaches, has been amply emphasised so that there is no time gap between the construction of the two components which quite often attracts avoidable Public criticism, apart from depriving the State from deriving full benefits of the investments made in the construction of the bridge project. Since much still remains to be desired in securing the most needed coordination in the simultaneous construction of the bridges and their approaches, through the implementation of the instructions already issued on the subject, it may further help to achieve the desired objective, if the following additional guiding principles are kept in view :

- (a) The bridge and its approaches should be treated as one project and these should be processed simultaneously in a well coordinated manner right from the conception stage to the completion stage.
 - (b) Project investigations including working out of suitable designs for both components should be initiated, arranged and accomplished well ahead of time by close mutual consultations as may be necessary, for the purpose of securing the much needed coordination in the simultaneous construction/completion of the Bridge including its approaches;
 - (c) The execution of both the components should be carried out in a duly coordinated sequence
2. If the above instructions as well as the instructions contained in the earlier circulars mentioned above are followed, there is really no reason why the construction of the bridges and their approaches simultaneously cannot be achieved to the general advantage of the public as well as to the State.

No. NHIII/P/31/77

Dated the 28th Oct. 1977

To,

The Chief Engineers and Addl. Chief Engineers of
State Public Works Departments, and Union
Territories dealing with National Highways.

Subject : Preparation of detailed project estimates for National Highway (Road and Bridge) Works — Avoidance of revision

On examination of the various Revised Estimates, particularly for road works received in this Ministry, it has been observed that the excess cost on account of revision in most of the cases is due to one or more of the following reasons :

- (i) Adoption of tendered rates which are generally higher than the sanctioned rates.
- (ii) Provision of soil used for earthwork in widening or raising having been borrowed from far off areas involving large leads, on the ground that good soil is not available nearby.
- (iii) Change in classification of soils.
- (iv) Provision of more quantity of earthwork on the plea that the sanctioned estimate was not based on correct site data.
- (v) Provision of increased thickness for road crust on the ground that the C.B.R. of sub-grade soil achieved during execution is less than that assumed in the sanctioned estimate.
- (vi) Provision of increased leads for carriage of stone aggregates for pavement due to change in quarry.
- (vii) Provision for raising of the road formation in certain lengths subject to flooding/inundation.
- (viii) Provision of improvement to geometrics not contemplated in the original sanctioned estimate, and
- (ix) Inclusion of construction/reconstruction/widening of weak/narrow culverts.

2. It has further been observed that excess over the original sanctioned estimates in many cases is more than 100%. While the excess due to adoption of tendered rates is at times unavoidable the excess due to other reasons mentioned above clearly indicated inadequate investigation in the initial stages. This can be avoided only if the original project estimates are prepared after due and proper investigations.
3. Your attention in this connection, is therefore, invited to various circulars issued by this Ministry from time to time and in particular to the ones indicated in below wherein the detailed instruction/guidelines to be kept in view while preparing the project estimates have been furnished. You are, requested to see that these guidelines/instructions are strictly adhered to. The copies of these letters, are enclosed for ready reference.
 - (1) NHI-37 (20)/70, dated the 2nd April, 1970.
 - (2) NHIII/P/3/76, dated the 26th July, 1976.
 - (3) NHIII/P/16/75, dated the 2nd August, 1976.
4. As there is an urgent need for proper investigation and data backing for formulating basic project proposals ensuring adequate quality control, you are requested to take immediate necessary action for ensuring such investigations before preparing detailed project estimates in future, since the safety and durability of the entire structure also depend upon such proper investigations.

Note :— Enclosures not attached

121.2.18

D.O.No. NHIII/P/31/77

Dated the 28th December, 1977

To, All State Chief Engineers by Name [(From DG (RD))]

Subject : Proper framing and scrutiny of estimates before submitting the same to the Ministry

Recently, the Minister of Shipping & Transport observed on some National Highway projects that revised estimates, in some cases, were more than 60% higher than the original estimates. Consequent of that, the Minister as well as earlier the Prime Minister as Minister incharge Transport had the occasion to advise that they would like the preparation/scrutiny of proposal initially at the original estimate stage itself to improve so that, as far as possible, technical specifications, scope of work etc. do not have to be changed subsequently.

I might mention in this connection that the need for a proper and thorough site investigation, surface and sub-surface explorations and other inputs for a proper project preparation has already been impressed upon the State Chief Engineers on several occasions in the past. Guidelines regarding design and specification for preparation of a road/bridge project have also been circulated to the States. To enable estimates being sent promptly and in a complete manner, a check list has also been sent to the States.

Another important point to be kept in view is that as soon as an excess beyond permissible limits is anticipated, revised estimates should be got framed expeditiously and the same sent with complete data and full justification to this Ministry for obtaining revised technical approval and financial sanction. This is important as the release of funds would, hereafter, be regulated by the sanctioned estimates—whether original or revised. Lastly, the revised estimates should not be loaded with new items for which separate estimates may be prepared, if need be.

I am sure, if the above suggestions are acted upon, the need for submission of revised estimates would automatically get reduced considerably. The matter has also been discussed in the recent meeting of all India Chief Engineers, at Calcutta on 23rd Dec., 1977. Your utmost attention and cooperation is requested in the above respects.

121.2.20
301

No. NHIII/P/31/77

Dated the 31st May, 1978

To, All the Chief Engineers and Addl. Chief Engineers concerned with NHs in the States and Union Territories.

Subject : Survey, investigation, project preparation etc. for National Highway (Road) Works

Brig. Gobindar Singh, Additional Director General (Roads) has in his D.O. letter No. PL-86 (1)/74-NHVI dated the 18th March, 1978, suggested that the survey-cum-investigation etc.

for National Highway (Road) Projects may be to the guidelines given in the Indian Roads Congress Special Publication No. 19 : "Manual for Survey, Investigation and Preparation of Road Projects". After completing the survey and investigations to the above guidelines etc. the next requirement would be of designing, estimating and preparing the project. Those stages in finalisation of a project are also comprehensively covered by various IRC Standards and/or by this Ministry's letters. It is, therefore, requested that the National Highway (Road) Projects, surveyed and investigated to the IRC guidelines (Special Publication No. 19) should further be designed, estimated, prepared and presented taking help of and giving due attention to the IRC Standards and this Ministry's circular letters given in the list enclosed and of any other IRC Standard and Roads Wing's Circular in the knowledge of the State Chief Engineers.

PUBLICATIONS OF THE INDIAN ROADS CONGRESS AND LETTERS OF THE MINISTRY OF SHIPPING & TRANSPORT (ROADS WING) COVERING SURVEY, INVESTIGATION, DESIGNING, ESTIMATING AND PROJECT PREPARATION OF NH ROAD WORKS

A. SURVEY, INVESTIGATION AND PROJECT PREPARATION

IRC Special Publication No. 19 of 1977 : Manual for Survey, Investigation and Preparation of Road Projects

B. DESIGNS AND ESTIMATES

I. IRC Publications :

- | | | |
|----------|--|--|
| (i) | IRC 73-1980. | Geometric design Standards for Rural Highways (under preparation). |
| (ii) | IRC : 32-1969 | Standards for vertical and Horizontal Clearances of Overhead Electric Power and Telecommunication lines as Related to Roads (in Metric Units). |
| (iii) | IRC : 34-1970 | Recommendations for Road Construction in Water-Logged Areas. |
| (iv) | IRC : 38-1970 | Design Tables for Horizontal Curves for Highways. |
| (v) | IRC : 39-1970 | Standards for Road-Rail Level Crossings. |
| (vi) | IRC : 41-1972 | Type Designs for Check Barriers |
| (vii) | IRC : 54-1974 | Lateral and Vertical Clearances. |
| (viii) | IRC : 52-1973 | Recommendations about the Alignment, Survey and Geometric Design of Hill Roads. |
| (ix) | IRC : 62-1976 | Guidelines for Control of Access on Highways. |
| (x) | IRC : 64-1976 | Tentative Guidelines on Capacity of Roads in Rural Areas. |
| (xi) | IRC : 65-1976 | Recommended Practice for Traffic Rotaries. |
| (xii) | IRC : 66-1976 | Recommended Practice for Sight Distance on Rural Highways. |
| (xiii) | Special Publication :
13-1973 | Guidelines for the Design of Small Bridges & Culverts. |
| (xiv) | IRC : 37-1970 | Guidelines for the Design of Flexible Pavements.
(Since published as IRC : 73-1980) |
| (xv) | IRC : 58-1974 | Guidelines for the Design of Rigid Pavements for Highways |
| (xvi) | IRC : 10-1961 | Recommended Practice for Borrowpits for Road Embankments Constructed by Manual Operation (First Reprint). |
| (xvii) | IRC : 36-1970 | Recommended Practice for the Construction of Earth Embankments for Road Works. |
| (xviii) | IRC : 56-1974 | Recommended Practice for Treatment of Embankment Slopes for Erosion Control. |
| (xix) | Specification for Road and Bridge Works. Ministry of Shipping & Transport (Roads Wing) | |
| (xx) | IRC : 2-1968 : | Route Marker Signs for National Highways. |
| (xxi) | IRC : 8-1969 : | Type Design for Highway Kilometre Stones. |
| (xxii) | IRC : 26-1967 : | Type Designs for 200 Metre Stones. |
| (xxiii) | IRC : 35-1970 : | Code of Practice for Road Markings.
(with paints) |
| (xxiv) | IRC : 67-1977 : | Code of Practice for Road Signs |
| (xxv) | Manual for Landscaping of highways including Arboriculture (under preparation). | |
| (xxvi) | Special publication : 15-1974 Ribbon Development Along Highways and its Prevention. | |
| (xxvii) | IRC : 25-1967 : Type Design for Boundary Stones. | |
| (xxviii) | Road Drainage Practice Around the World Special Publication No. 5-1967. | |
| (xxix) | IRC : 49-1973 : Recommended Practice for the Pulverization of Black Cotton Soils for Lime-Stabilization. | |

*Since revised IRC : 37-1984

(xxx) IRC : 50-1973 : Recommended Design Criteria for the Use of Cement Modified Soil in Road Construction.

(xxxi) IRC : 51-1973 : Recommended Design Criteria for the Use of Soil-Lime Mixes in Road Construction.

CIRCULAR LETTERS OF THE MINISTRY OF SHIPPING AND TRANSPORT (ROADS WING) COVERING SURVEY, INVESTIGATION DESIGNING, ESTIMATING AND PROJECT PREPARATION OF NATIONAL HIGHWAY ROAD WORKS

No. & date of Ministry's circular letter. Subject in brief

A. STANDARDS, DESIGNS AND ESTIMATES :

- | | | |
|--------|-----------------------------------|--|
| (i) | NHI-37(2)/70 dt. 2.4.70 | Development Plan of National Highways during 1970-77. |
| (ii) | NHI-40(3)/71 dt. 29.1.71 | Siting of bridges and fixing alignment of approaches thereto. |
| (iii) | NHIII/Misc/95/75 dt. 30.10.75 | Providing guard stones on high embankments. |
| (iv) | PL-67(5)/76 dt. 17.5.76 & 31.5.77 | Camber for road surfaces for N Hs in rural locations. |
| (v) | PL-30(147)/74 dt. 26.7.76 | Treatment of cut sections in road formation. |
| (vi) | PL-67(12)/76 dt. 10.9.76 | Fixing grade lines for new roads/existing roads proposed to be raised. |
| (vii) | PL-67(4)/76 dt. 21.3.77 | Fixing top level of guide bunds and immediate approaches to bridges. |
| (viii) | NHIV-50 (20)/77 dt. 27.9.77 | Fixing deck level of Bridges and culverts. |
| (ix) | NHIII/P/35/77 dt. 24.12.77 | Ensuring fluent grade lines at culvert locations. |
| (x) | PL-30(20)/77 dt. 21.2.78 | Gradients for approaches to railway overbridges. |
| (xi) | NHIII/P/30/77 dt. 25.2.78 | Integrated project planning for bridges and their approaches. |
| (xii) | PL-86(41)/72 dt. 13.8.73 | Soil investigations and design procedures for high embankments. |
| (xiii) | NHIII/P/3/76 dt. 26.7.76 | Collections and presentations of soil investigations data for pavement design. |
| (xiv) | PL-50(13)/74 dt. 10.9.74 | Treatment of slipping, sliding and unstable stretches of road formation. |

B. AMENITIES AND ARBORICULTURE

- | | | |
|------|---------------------------|--|
| (i) | NHIII/P/15/75 dt. 20.5.76 | Plantations, maintenance and cutting of trees. |
| (ii) | PL-30(41)/76 dt. 7.7.76 | Wayside amenities and landscaping etc. |

C. REVISED ESTIMATES, CHECK LISTS ETC

- | | | |
|-------|----------------------------|--|
| (i) | NHIII/P/50/76 dt. 1.7.76 | Check lists for revised estimates for road and bridge works. |
| (ii) | NHIII/P/31/77 dt. 28.10.77 | Preparation of detailed project estimates for road and bridge works-avoidance of revision. |
| (iii) | NHIII/P/31/77 dt. 28.12.77 | Preparation of detailed project estimates for road and bridge works-avoidance of revision. |

121.2.22
1100

No. NHIII/P/5/77

Dated the 13th July, 1978

To,

The Chief Engineer
(All State Governments dealing with N. Hs.)

Subject : Coordinated completion of realignments of National Highways dictated by submergence consequent to damming of rivers for irrigation and/or power

I am directed to say that it has been observed that lack of coordination between the Irrigation (Dam) and State P.W.D. (dealing with National Highways) Authorities and inadequate appreciation of the the problems and requirements have resulted in delay in completion of the realignments dic-

tated by submergence consequent to damming of rivers for irrigation and/or power. I am therefore to request that the State P.W.D. may adopt the following procedure to ensure that the realignments are completed in time to coincide with the utilisation of Dams :—

1. On receipt of the intimation from the Dam Authorities, the State P.W.D. (the N.H. Authority) should forward an estimate for survey, investigation and project preparation of the realignment to the Dam Authority for acceptance and depositing the funds and get their acceptance to the principle of sharing that the Dam Authority would bear the complete cost of realignment to the dimensions, standards, specifications etc. as obtaining on the existing road. (The cost of the survey, investigation and project preparation including designing should be a realistic estimate but within 2¼% of the likely cost of the whole project of the realignment).
2. On receipt of the acceptance and the deposit from the Dam Authority, the State P.W.D. should survey and investigate the realignment in consultation with the Regional Superintending Engineer of the Ministry of Shipping & Transport (Roads Wing) taking help of the IRC publications and this Ministry's circulars on the subject, select the alternative alignments, work out the approximate costs of those feasible and recommend along with all the documents to the Ministry of Shipping and Transport (Roads Wing) for approval, the one considered best by the State Government.
3. On receipt of the approval to the realignment including bridge sites, detailed project should be prepared separately but simultaneously for road including culverts and for bridges and forwarded to the Ministry of Shipping and Transport (Roads Wing) for technical approval and financial sanction to their share of the cost, if so dictated by the conditions. The Ministry of Shipping and Transport (Roads Wing) will have to share in case the realignment is required by them to be to dimensions standards, specifications etc. higher than those obtaining on the existing road. The realignment should at least be to full 2 lane NH standards with bridges designed to one lane of IRC class 70 'R' and 2 lanes of IRC 'A' loading.
4. On receipt of the technical approval etc. from the Ministry of Shipping and Transport (Roads Wing), the Dam Authority should be asked to deposit the funds and in the meantime, tenders etc. should be called for.
5. The realignment including bridges should be completed well before commissioning of the dam. For programming the work, recourse may be taken to the IRC Special Publication No. 14 of 1973 : "Manual for the Application of Critical Path Method on Highway Projects in India" and to this Ministry's circulars on the subject.

121.2.25

D.O. LETTER NO. F. 1 (8)/PF-II/80, DATED 31.5.1980 FROM THE SECRETARY, MINISTRY OF FINANCE (DEPTT. OF EXPENDITURE) ADDRESSED TO THE SECRETARY, MINISTRY OF SHIPPING AND TRANSPORT, NEW DELHI

The increasing number of cases in which the cost estimates of projects have had to be significantly revised upwards for various reasons has been adversely commented upon in the meetings of the Informal Consultative Committee and in other forums. The Finance Minister has also expressed unhappiness over this development and has emphasized the need for a more thorough appraisal of projects before approval is accorded. I am writing this letter to you to seek your cooperation in a realistic assessment of the costs of projects referred to EFC and PIB so that cases requiring large cost revision become only exceptions and not the rule.

2. A study of cases relating to revised cost estimates approved by PIB shows that escalations in costs arise due to (i) rise in the cost of materials/equipment and subsequent increase in duties and taxes and (ii) inclusion of new items of work not provided for in the original estimates and in some cases even in the subsequently approved revised estimates (iii) inadequate provisions or omissions in the initial estimates and (iv) changes in the scope of the project. Leaving out (i) as arising out of conditions beyond the control of the Ministries; there is no reason why excesses due to the other factors cannot be effectively eliminated by a careful, realistic and systematic assessment of the cost estimates included in the original proposal itself.
3. The need for improving the quality of feasibility reports, on which investment decisions are taken, has been enjoined in a number of circulars issued by the Finance Ministry after 1967. Guidelines for the preparation of feasibility reports for the industrial projects have been issued by the Planning Commission which were circulated vide Ministry of Finance (Department of Expenditure) O.M. No. 8 (20)/PF-II/75, dated 23.8.1975. You would agree that it is very important to prepare a sound feasibility report, by engaging competent consultants where necessary.

4. After a project is sanctioned on the basis of a feasibility report, the Department will have to firm up the cost estimates within a year of the PIB's approval on the basis of a detailed Project Report prepared after appointment of Consultants, completion of detailed engineering and invitation of tenders for civil works, plant and machinery etc. In case the firmed up estimates are in excess of original estimates by 20%, the firmed up estimates will have to be brought up before PIB/EFC for fresh consideration while in other cases, the Ministries would be competent to approve the revised cost estimates. In this connection, a reference is invited to our letter dated 23.11.1978.
5. If these instructions designed to improve control over costs are followed, the firmed up time and cost estimates of a project would be available within a year. The Ministries will also be in a better position to monitor the implementation and fix responsibility for the large avoidable cost and time over-runs. It will be appreciated that adherence to these procedures will promote effective control of costs of projects as described above. I shall be grateful if you could kindly ensure compliance with the prescribed procedures by the project authorities of your Ministry.

121.2.26

No. NHIII/P/10/80

Dated the 23rd Aug. 1980

To,

The Chief Engineers & Addl. Chief Engineers of State Public Works Department and Union Territories (dealing with National Highways).

Subject : Preparation of detailed project estimates for National Highway (Roads and Bridges) Works-Avoidance of revision

I am directed to invite your attention to this Ministry's letter No. NHIII/P/31/77 dated the 28th October, 1977 wherein the need for proper investigation and data backing for formulating basic project proposals ensuring adequate quality control was stressed with a view to avoid the need for preparation of revised estimates. The Ministry of Finance (Department of Expenditure) have pointed out that increasing number of cases in which the cost estimates of projects have had to be significantly revised upwards for various reasons has been adversely commented upon in the meetings of the Informal Parliamentary Consultative Committee and in other forums. The Finance Minister has also expressed unhappiness over this development and has emphasised the need for a more thorough appraisal of projects before approval is accorded. A copy of the Ministry of Finance D.O. letter No. F. 1(8)/PF-II/80 dated 31.5.1980 from the Secretary, Ministry of Finance, (Deptt of Expenditure) to the Union Transport Secretary is enclosed. It is requested that the State PWD should exercise more care while preparing estimates for NH works and other centrally financed works and eliminate the need for preparation of revised estimates subsequently by a careful, realistic and systematic assessment of the cost estimates included in the original proposal itself.

121.2.28
121.5

No. NHIII/P/10/80

Dated the 30th December, 1980

To,

The Chief Engineers & Addl. Chief Engineers of State PWDs and Union Territories (Dealing with NHs).

Subject : Preparation of detailed project estimates for NH (Roads & Bridges) Works-Avoidance of revision

I am to state that the Union Deputy Minister of Finance in one of the cases relating to the revised estimates for National Highway works has minuted as follows :—

"I am disturbed at the manner in which we are presented with a fait accompli. As the work has been completed and the payments are in any case required to be made, I assume, no purpose will be served by withholding our consent to the revised estimate. I would, however, like action to be taken against those responsible for the abnormal delay which has resulted in escalation of cost. The shortages of materials has emerged only in the past year or two. Adding of subsequent items which do not figure in the original estimate imply that when the estimates were originally sanctioned, we did not have the complete data for considering sanction to the estimates. There is no reason why such items cannot be envisaged at the beginning only. The Ministry of Shipping and Transport may be requested to issue suitable instructions to ensure that such instances do not occur in future."

2. As you are aware, the Ministry has time and again been stressing through circular letters and discussion at Chief Engineers' meetings, review meetings, etc. the need for proper and thorough investigation and data backing for formulating realistic project proposals and a time-bound programme for

execution with a view to avoiding subsequent revision of cost estimates. The Ministry's circular No. NHIII/P/31/77 dated the 28th October, 1977 listed out the usually observed causes of cost revision and explained as to how most of these could have been obviated through adequate investigations in the earlier stages. Copies of earlier instructions/guidelines on the subject were also appended to that letter for reference and compliance. This was followed by a reiterating circular No. NHIII/P/10/80 dated the 23rd August, 1980, with which a copy of the D.O. letter No. F. 1 (8)/PF-II/80 dated the 31st May, 1980 on the above subject from Secretary, Ministry of Finance (Deptt. of Expenditure) addressed to the Transport Secretary was forwarded. Despite all this, the situation with regard to the revision of cost estimates has not improved though this deserves serious attention at all levels.

3. It is, therefore, once, again requested that the State PWDs should exercise utmost care while preparing estimates for National Highway and other centrally financed works and eliminate the need for upward revision of costs by a careful, realistic and systematic assessment of the scope and cost of works at the time of initial formulation of the proposals and estimates.
4. It is also requested that contents of this circular be brought to the notice of all concerned in your Department dealing with National Highways and other centrally financed works for strict compliance.

121.2.29

No. RW/NHIII/P/17/79

Dated the March 5th, 1981

To,

All Chief Engineers of State Governments and Union Territory
Administrations dealing with National Highways and
Other Roads financed wholly or partly by Centre.

Subject : National Highways-Widening of narrow roads and bridges-Need for simultaneous completion

Instances have come to the notice of this Ministry that the pavement of the sections of National Highways on either side of the existing narrow bridges are widened to two-lane and the work of widening of narrow bridges is not taken up for quite some time. In such cases, the fast moving vehicles approaching the bridge from the widened carriageway of road are exposed to the risk of collision with the railings of the bridge or with the oncoming vehicle. Occurrence of some serious accident causing the loss of life and property due to this cannot be ruled out.

2. To avoid inconvenience to the flow of traffic and the resulting danger of accidents, it is necessary to programme the execution of work in such a way that the widening of the narrow bridge and the adjoining carriageway is completed almost simultaneously. Further, to avoid the time lag in sanctioning the estimates, as far as possible, the estimates for widening of narrow bridge and for widening of approach roads should be prepared and submitted to this Ministry for sanction simultaneously.
3. In case where narrow bridges may have to be left unwidened for some time after completion of widening of road on either one or both sides, suitable warning signs on either side of the bridge should be invariably provided.
4. The contents of this letter may kindly be brought to the notice of all Technical Officers in your State dealing with National Highways and Roads financed wholly or partly by Centre. Fifteen sapare copies of this letter are enclosed herewith for this purpose.

Note : Encls-not attached.

121.2.30

No. RW/NHIV-2 (2)/81

Dated the 31st Oct, 1981

To,

All the State Chief Engineers Dealing with Naional Highways.

Subject : Simultaneous action in respect of construction of minor bridges and their diversion roads

Recently it has come to the notice of this Ministry that in respect of reconstruction of some minor bridges, there was some delay in execution because of not taking up **simultaneous** action for the construction of bridges and their diversion roads. This has invited comments from the audit. All the State P.W.Ds are, therefore, requested that simultaneous action should always be initiated in respect of construction of bridges, approaches and their diversion roads so that the

projects as a whole are completed expeditiously as per targetted programme. It is preferable that the work on the diversion road is done either departmentally or as a part of the work on the main bridge.

121.2.31

No. RW/NHIII/P/5/83

Dated the 18th May, 1983

Subject : Scrutiny of estimates pertaining to National Highways and other Centrally Sponsored Works

In the Expenditure Finance Committee meeting held on 1st March, 1983, it was observed that there were wide variations in the scope and cost of the works between the original and revised estimates. In view of this it was felt that there was need to improve the system of estimation and scrutiny, so that these were carried out in a proper and thorough manner.

2. Several circulars and guidelines have been issued in the past covering various aspects of preparation of projects and estimates. These are reiterated as follows to avoid frequent revision of the estimates :

- (i) Proper survey and investigations should be carried out before the detailed estimates are prepared so that the initial assessment of cost is more realistic. The urgent need for proper investigations and data backing for formulating the project proposals was brought out in this Ministry's circular letter No. NHIII/P/31/77 dated 31st May, 1978 (For road and bridge projects separately) wherein the relevant circulars and IRC Codes to be used were quoted (copies enclosed for ready reference). If necessary, separate estimates for survey and investigations for collecting the data for major projects may be prepared and got sanctioned in advance.
- (ii) The estimates for land acquisition should be sanctioned separately. Before the estimates for construction works are sanctioned it should be ensured that the land, where required, is actually available.
- (iii) The cost of the project should be up-dated at the time of according financial sanction and all escalations during the time gap between the date of preparation of the detailed estimate and the date of actual sanction may be taken into account.
- (iv) It is quite necessary that the works are completed within the realistic time frame which shall be carefully assessed and stipulated in the execution programme at the time of sanction of the project. To ensure proper quality and timely completion of works, only capable and experienced contractors should be selected for award of the works. For bridge works costing Rs 50.00 lakhs and above, the instructions for pre-qualifications of the tenderers have already been issued to State C. Es under Ministry's letter No. NHVI-50 (3)/83 dated 31st March '83 and these should be followed.

121.2.33

No. NHIII/P/9/84

Dated the 19th April, 1984

To,

All Secretaries of State Govts. (Depts. dealing with National Highways)

Subject : Recommendation of B.B. Vohra Committee suggesting that the sanction of works that lapses after five years if the works does not get operative should lapse after two years as five-years period is too long

I am directed to say that the Government of India had appointed a Highway Powered Committee in Feb., 1982 under the Chairmanship of Shri B.B. Vohra to review the existing agency system pertaining to National Highways and to make recommendations for better performance. The Committee submitted its report in Sept. 83 and the Govt. of India has accepted the recommendations of this Committee. One of the recommendations made by this Committee is as under :—

"The present provision under which the sanction for work automatically lapses if it does not get operative by the State for five years should be modified to reduce this period to two years as a 5-year period is much too long."

2. This Ministry is of the view that after an estimate for a particular job is sanctioned, its execution should start as early as possible. The present procedure which envisages that the sanction for work would lapse if it does not get operative within five years is a factor partly responsible for delay in the execution of works. It has therefore been decided to reduce this time limit of five years to two years in the interest of expeditious execution of National Highway works. Henceforth the sanctions of National Highway works would lapse if the execution of the projects is not undertaken within two years from the date of sanction of the estimate. This may please be noted and all concerned informed accordingly. I am further to request that, if there is no objection, a copy of the instructions issued may kindly be forwarded in due course to the Ministry also for reference and record.

Circulated under letter No. PL-80 (68)/82 Dated 2.5.84

GENERAL GUIDELINES FOR PREPARATION OF WORLD BANK PROJECTS—PROJECT REPORT AND FORECAST ESTIMATES

CONTENTS

1. Report on the Project

- Name of road, terminal points
- Length
- Division into sections, based on terrain and traffic volume. If there is a variation in traffic volume along the road, the same should be split into smaller sections such that the traffic volume in each is generally uniform.
- Type of work
- Terrain
- Present condition of highway
- Present traffic
- Traffic in the past
- Economic indicators such as GNP, agricultural output, industrial output, population, motor vehicle population in the State
- Need for the work
- Standards for the work
- Indicate whether alternative bids are permitted for any component
- Any particular difficulties
- Status of Land Acquisition
- Is it proposed to collect toll ?
- Organisation structure of P.W.D.
- Supervision arrangement

2. Design

- Pavement design based on CBR/Deflection study at each km.
- Preliminary design of high embankment
- Design of longitudinal section
- Preliminary design of major bridges including depth and type of foundations
- **Preliminary** design of minor bridge, canal crossings, road overbridges and typical village crossings
- Preliminary design of interchanges
- **Preliminary** design of grade-separators

3. Drawing

- Locality map
- Typical cross-sections, one at each representative point in a km., and at high embankments, showing pavement
- Longitudinal section of road
- General arrangement drawing of major bridges, showing dimensioned components
- General arrangement drawing for minor bridges, canal crossings, road overbridges and typical village crossings
- Preliminary drawings of typical interchanges
- Preliminary drawings of grade separators
- **Preliminary drawings of Toll plaza and important junctions**

4. Estimates

- For each section separately
- Quantities of earthwork, pavement components
- Borrow area and quarry charts
- Slab culverts in terms of running metre

- Pipe culverts in terms of members for each category of diam
- Minor bridges and other crossings enumerated in item No. 2 relating to Design with location, in terms of running metre (based on typical estimates)
- Major bridges, with location, with detailed quantities of work
- Typical estimate of an interchange, and the location and number of such
- Typical estimate of a grade separator, and the location and number of such
- Analysis of rates
- Basis for running meter cost of bridges and culverts
- Estimate based on above details. The cost worked out should not vary beyond 10% of final detailed estimated cost
- Centages as under :

10% Physical contingencies	Total
1% Quality Control	Total
W.C. Establishment	Total
9% Agency Charges	Total
Total (A)	

Year 1	Phasing 2	Escalation 3	Total Cols 2+3
1984-85	5% of A	8% of Col. 2	
1985-86	15% of A	7% of Col. 2	
1986-87	25% of A	7% of Col. 2	
1987-88	30% of A	7% of Col. 2	
1988-89	25% of A	6% of Col. 2	

121.2.37

No. RW/NHIII/Coord/34/84

Dated the 12th December, 1984

To,

The Secretaries of all States
PWD (dealing with National Highways)

Subject : Recommendation of Vohra Committee regarding National Highway works costing less than Rs 10 lakhs for which administrative approval is to be accorded

I am directed to refer to this Ministry's letter of even number dated the 24th March, 1984 requesting the State Governments to prepare a detailed estimates and forward only the abstract of estimate indicating various quantities, rates and amounts to this Ministry for according Administrative approval. While forwarding abstract of estimates information as per details reproduced below is required to be furnished in terms of the provisions contained in the National Highways (Amendment) Rules 1976. (Circulated vide this Ministry's letter No. PL-30 (193)/71 dated the 15th October, 1976).

- (a) Proposal in brief with rough Plan of the area in which the work is to be executed.
- (b) Extent of preliminary survey and investigation done;
- (c) Broad features showing the existing position and the improvements desired;
- (d) Traffic data;
- (e) Duration of execution;
- (f) Phasing of expenditure and also physical performance;
- (g) Rough quantities and estimated cost under broad headings such as :

(1) <i>Road Works</i>	(2) <i>Bridge Works</i>
Land acquisition; earthworks; road material	Foundations, superstructure, guide bunds, etc.
- (h) Detailed specifications;

- (i) List of equipments required for speedy execution of the work;
 - (j) Alignment plan and longitudinal section in case of roads; hydraulic data and outline designs of structure in case of bridges; and
 - (k) Particulars for comparison of the similar works carried out in the same region.
2. Attention is also invited to the condition 10 of the Schedule of the N.H. rules referred to above and reproduced below :—
- (i) In case of the works where standards and designs adopted in the estimates are in accordance with the Indian Roads Congress Code and *specification and any other relevant instructions*, guidelines, standard beidge designs etc. issued by the Central Government from time to time. copies of the sanctions accorded by the executive agency shall invariably be endorsed to the Regional officers concerned of the Ministry in the Central Government dealing with National Highways alongwith complete copy of the estimate so that even after sanction, they could examine the matter and bring to the notice of executive agency deviations from such Code, specifications, instructions, guidelines, standard bridge designs, if any;
 - (ii) Where for any work, deviations from approved standards, specifications, instructions, guidelines issued by the Central Government have to be made due to local conditions, no works shall be sanctioned by any executive agency unless a complete copy of the estimate is furnished to the Regional Officer concerned of the Ministry in the Central Government dealing with National Highways and this approval has been obtained in accordance with the general instructions issued by them from time to time governing the disposal of such cases. A brief mention of these deviations shall also be made by the executive agency in the abstract estimates to be sent to the Central Government quoting the reference of approval of the Regional Officer concerned;
 - (iii) In all other cases where proposed deviations do not fit in with the general instructions issued by the Central Government or are not necessitated due to local conditions, technical and financial sanction thereto may be accorded by the executive agency with the prior approval of the Central Government on a reference being made in this behalf alongwith a copy of the detailed estimate through the Regional Officer of the Ministry of the Central Government dealing with the National Highways who shall forward the same to the Central Government with his comments thereon.

These provisions shall continue to be applicable.

3. I am accordingly to request that besides supplying the information mentioned in para 1, the procedure mentioned in the schedule to National Highways (Amendment) Rules 1976, referred to in para 2 above, may also be kept in view while according technical sanction.

121.2.39

No. RW/NHIII/P/31/77-Pt.

Dated the 14th Jan., 1985

To,

All the Chief Engineers of States and Union Territories
(dealing with National Highways)

Subject : Preparation of technical proposals for road works included in the Annual Plan

The need for proper and complete field investigations, surface and sub-surface explorations and other technical inputs required for the preparation of detailed project estimate has already been brought to the notice of State Chief Engineers on several occasions in the past. However, due to lack of time or due to other reasons, many times the project estimate are not prepared after carrying out detailed engineering studies. This has often resulted in high cost over-runs and inordinate delay in the completion of the projects. In order to avoid this and subsequent need for revision of estimates, it is appropriate that complete investigations for the project are carried out first before taking up the preparation of the detailed cost estimate. It is therefore requested that initially only technical proposal as distinct from the cost estimate, should be prepared by the state PWD and forwarded to the Ministry for approval.

2. Detailed guidelines for carrying out preliminary survey, final location survey, traffic survey, soil & material survey, drainage and cross drainage structures etc. have been given in the IRC Special Publication No. 19 "Manual for survey, investigation and preparation of road projects". Further, this manual specifies details to be furnished in the longitudinal section and cross-sections, sizes of these drawings, scales to be adopted and other details to be incorporated in the technical proposal. Also a check list has been given to verify that the requisite particulars are incorporated in the technical proposal before it is sent to the Ministry. The technical proposal may be either for strengthening the existing pavement, widening single lane to two lane, construction of bypass or geometric improvements etc. For the technical proposal for strengthening existing weak pavement besides other relevant details it should include the properties of the subgrade soils (CBR values and other test details) Benkelman beam deflection study, traffic in terms of commercial vehicles per day at the last

traffic count, thickness and composition of the existing pavement, year of providing last strengthening or surfacing layer with details etc. Similarly for the technical proposal for the geometric improvement of existing deficient section besides other details it should include horizontal and vertical profile of existing section, properties of horizontal and vertical curves of various alternatives, the details regarding available land width, private and public properties to be acquired in various alternatives, details regarding culverts and bridges coming in the new alignment etc. The technical proposal for any scheme for the improvement of National Highway should include all the relevant technical details and should examine various alternatives with their economic viability. Such technical proposals with various alternatives will be examined in the Ministry in consultation with State PWD and technically sound and economically viable alternative will be selected. The approved technical proposal will be communicated by the Ministry to the State PWD. Only after receipt of the approval to the technical proposal from the Ministry, the cost estimate should be prepared at the current schedule of rates and forwarded. This procedure will help in the selection of appropriate alternative and will avoid delay in the sanction of the cost estimate.

3. The Annual Plan for 1985-86 has been prepared in advance so that sufficient time could be given for carrying out detailed investigation and collection of relevant technical data for the schemes included in the Plan. The copy of the Annual Plan for your State is being sent to you separately. A comprehensive circular letter was issued by the Ministry vide No. NHIII/P/31/77 dated 31.5.78 listing various IRC Codes and this Ministry's circulars to be referred to in the preparation of detailed project estimates. In order to further help in the preparation of technical proposal a statement showing IRC Codes and this Ministry's circulars to be referred for each scheme included in the plan is enclosed herewith for your ready reference. It is requested that detailed technical proposals based on relevant IRC Codes and this Ministry's circulars etc. for the scheme included in the A.P. 85-86 may please be forwarded to this Ministry at the earliest.

SCHEMEWISE LIST OF PUBLICATIONS OF IRC AND THIS MINISTRY'S CIRCULARS TO BE REFERRED IN THE PREPARATION OF TECHNICAL PROPOSALS

Sl. No.	Scheme	Name & No. of IRC Publications	Subject & No. of this Ministry's circulars
1.	Construction of missing links	IRC Special Publication No. 10-Manual for survey, investigation and preparation of road projects.	Development Plan of NHs during 1970-71 NH-37 (2)/70 dt. 2.4.70
		IRC Special Publication No. 13-Guidelines for the design of small bridges & culverts.	Siting of bridges and fixing alignment of approaches thereto. NH-40 (3)/71 dt. 29.1.71.
		IRC : 25-1967-The type design for boundary stones.	Fixing gradelines for new roads/existing roads proposed to be raised. PL-67 (12)/76 dated 10.9.76
		IRC : 38-1970 Design tables for horizontal curves for highways.	Plantations, maintenance and cutting of trees. NHIII/P/15 dt. 20.5.76.
		IRC : 52-1981-Recommendations about the alignment, survey, geometric design of hill roads (where applicable)	Wayside amenities and landscaping etc. PL-30 (41)/76 dated 7.7.76.
		IRC : 73-1980-Geometric design standards for rural highways.	
2.	Imp. to low grade sections.	As I above	As I above
3.	Widening single lane road to two lanes.	IRC : 64-1976 Tentative guidelines on capacity of roads in rural areas.	Preparation of detailed project est. for NHs (Rds. & Brds.) work-Avoidance of revision NHIII P 31/77 dt. 28.10.77
		IRC : 37-Guidelines for the design of flexible pavements.	Camber for road surfaces for NHs in rural locations. PL-67 (5)/76 dt. 31.5.77.
4.	Widening and strengthening of single lane to two lane	IRC : 37-1984 Guidelines for the design of flexible pavements (modified)	Preparation of detailed project estimate for NHs (Road & Bridge) works & avoidance of revision. NHIII/P/31/77 dt. 28.10.77
(b)	First stage strengthening of two lane sections	IRC : 81-1981-Tentative guidelines for strengthening of flexible road pavements using benkelman deflection technique.	Camber for road surface for NHs in rural locations. PL-67 (5)/76 dt. 17.5.76 & 31.5.77.

(c)	Second stage strengthening of two lanes sections	—do—	Collection & presentations of soil investigation data for pavement design. NHIII/P/3/76 dt. 26.7.76.
(d)	Strengthening existing weak major arterial routes.		
5.	Construction of bypasses around congested towns & imp. of permanent suitable link	IRC Special Publication No. 19-Manual for survey, investigation & preparation of road projects.	Need to limit acquisition of land to the minimum possible extent RW/NHIII/P/43/82 dt. 12.11.84.
		IRC : 62-1976-Guidelines for control of access of highways.	Preparation of detailed project estimate for NHs (R&B) works avoidance of revision. NHIII/P/31/77 dt. 28.10.77.
		IRC : 66-1976-Recommended practice for sight distance on rural highways.	Provisions of junctions at the ends of bypasses PL-30 (49)/79 dt. 29.9.84.
		IRC : 73-1980 Geometric design for rural (non-urban) highways.	
		IRC : 11-1962-Recommended practice for the design of layout of cycle tracks (where applicable)	
6.	Replacing railway level crossing with over & under-bridges	IRC : 62-1976-Guidelines for control of access on highways.	Gradient for approaches to railway overbridges. PL-30 (20)/77 dt. 21.2.78.
		IRC : 73-1980-Geometric design standards for rural highways.	Integrated project planning for bridges and their approaches. NHIII/P/30/77 dt. 25.2.78.
		IRC : 66-1976-Recommended practice for sight distance on rural highways.	
7.	Reconstruction of culverts.	IRC Special Publication No. 13 of 1973-Guidelines for the design of small bridges & culverts.	Ensuring fluent gradelines at culvert locations. NHIII/P/35/77 dt. 24.12.77.
			Fixing deck level of bridges and culverts. NHIV-50 (20)/77 dt. 27.9.77.
8.	Construction of approaches to bridges.	IRC : Special publication No. 13-1973 : Guidelines for the design of small bridges & culverts.	Integrated project planning for bridges & their approaches. NHIII/P/30/77 dt. 28.2.78.
		IRC : Special publication No. 23-1983 Vertical curves for highways.	Investigation and design for high embankment at approaches to bridges & overbridges on NHs & other centrally financed roads. NHVI-50 (21)/79 dt. 25.1.80.
		IRC 75-1979-Guidelines for the design of high embankments.	
9.	Permanent remedial measures for flood prone reaches.		Flood damages to NHs-instructions regarding mitigations, reporting & remedial measures. NHIII/P/13/79 dt. 4.8.81.
10.	Wayside amenities	—	—
(i)	Roadside rest areas.	—	Provisions of wayside amenities along highways NHIII/P/16/82 dt. 11.5.82.
(ii)	Truck parking area.	IRC : 41-1972-Type designs for check barriers.	
(iii)	Highway safety imp. works.	IRC-38-1970-Design tables for horizontal curves for highways.	Design of intersections PL-30 (49)/79 dated 25.7.84.
		IRC : 66-1979-Recommended practice for side distance on rural highways.	
		IRC : 73-1980-Geometric design standards for rural highways.	
11.	Landscaping of highways.	IRC special publication No. 21-1979-Manual on landscaping of roads.	Plantation, maintenance & cutting of trees on NHs. NHIII/P/15/75 dt. 20.5.76.

No. RW/NH. III/Coord/86/84

Dated the 25th March, 1985

To,

All Technical Officers in the H.Q. Office and Regional Offices

Subject : Improving the quality of project preparation for Highway Schemes

The Ministry has been striving to improve the quality of project preparation in respect of Highway Schemes. Instructions have been issued in the past to the State PWDs to carry out detailed survey, investigation, testing and design of Highway Schemes in order to formulate proposals on realistic basis and to achieve their completion without undue cost/time over-run. The Indian Roads Congress **Special** Publication No. 19-Manual for Survey, Investigation and preparation of Road Projects also deals in detail with the project preparation procedures and requirements.

In the case of highway and bridge schemes posed for World Bank Assistance, the project preparation was carried out to conform to levels expected of international contracts. The State PWD Engineers and Consultants engaged in that work could prepare the projects acceptable in international level. It should be our endeavour to achieve such a high degree of precision and expertise in project preparation of all major highway and bridge schemes. In the first instance, it is proposed to start the work on the basis of one NH project for each H.Q. Zone. This model scheme will be initiated and completed on the lines of projects of World Bank Assistance. The work will then be extended to cover many such schemes.

The Project Chief Engineers are requested to identify one scheme each costing about Rs 2.00 crores or more. After the schemes are identified, the Road and Bridge Directorates are requested to arrange preparation of projects. The action taken in this regard may please be intimated to Chief Engineer (Planning) for being shown to DG (RD).

121.3 AGENCY AND OTHER CHARGES & RECEIPTS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
121.3.1	WI-43 (6)/65 dt. 13.11.64	Provision for work-charged establishment	121.3/1
<u>121.3.2</u> (141)	IDA/W-20 (21)/63 dt. 17.7.65	Payment of agency charges on land acquisition	See Code No. 141
121.3.3	NHI-37 (9)/70 dt. 1.1.71	Provision of funds for Investigatory works pertaining to NHs.	121.3/1
121.3.4	NHIII-33 (13)/72 dt. 24.9.75	Agency charges in respect of NH works	121.3/2
<u>121.3.5</u> (150)	NHIII/P/4/76 dt. 4.2.76	Levy of departmental charges over/under bridges	See Code No. 150
121.3.6	NHIII/P/18/80 dt. 17.11.80	Procedure for adding centage charges	121.3/2
121.3.7	RW/NHIII/P/18/81 dt. 6.12.84	Accounting of expenditure incurred on purchase of petrol, oil and lubricant, repairs of jeeps, purchase of stationery, telephone etc. for NH works.	121.3/2
<u>121.3.8</u> (3100)	RW/NHIII/P/20/83 dt. 18.12.84	Guidelines on utilisation of the 1 per cent provision allowed in the NH work estimates for quality control.	121.3/2

PROVISION FOR WORK-CHARGED ESTABLISHMENT

Extracts of Decision from File No. W1-43 (6)/65 dt. 13.11.64

The provision for work-charged establishment should be on the following lines :

- (a) In the case of building, the 2% will not be given in addition to the 3% for contingencies unless there are special reasons.
- (b) **Bridges**—Provision may be allowed upto the following limits :—
- | | |
|--|-------|
| (i) Projects under Rs 25 lacs | — 2% |
| (ii) Projects of Rs 25 lacs and above but below Rs. 50 lacs. | — 1½% |
| (iii) Projects of Rs 50 lacs and above | — 1% |
- (c) **Roads**—Provision may be allowed upto the following limits :—
- | | |
|---|-------|
| (i) Projects under Rs 25 lacs | — 2% |
| (ii) Projects of Rs 25 lacs and above but below Rs. 50 lacs | — 1¾% |
| (iii) Projects of Rs 50 lacs and above | — 1½% |

121.3.3

No. NH1-37 (9)/70

Dated the 1st January, 1971

To,

The All State Governments
(dealing with Roads)

Subject : Provision of funds for Investigatory works pertaining to National Highways

I am directed to say that serious problems of delays in execution rise in costs and disputes with contractors have come up in regard to National Highway Projects. These problems are mainly due to the fact that the projects are not being prepared after proper investigations, detailed surveys and design which results not only in the preparation of unrealistic estimates but also causes considerable delay in the finalization of projects. The essentiality of paying proper attention to this important aspect has been brought repeatedly to the notice of the State Governments and the State Chief Engineers concerned and with a view to ensuring that the projects are prepared properly, adequately, correctly and in time as planned, items of works included in the Fourth Five Year Plan pertaining to National Highways have also been intimated to the State Chief Engineer from time to time for necessary advance action. It is, however noticed that there has not been very appreciable improvement and several projects are still being delayed, are being submitted in an incomplete way or without proper investigation and detailed survey and design leading to delays in sanctions also.

2. The State Chief Engineers, during discussions from time to time, have been indicating difficulties in getting sanction for the staff required for this specific purpose of undertaking investigatory works. It has accordingly been emphasised by them that it is absolutely essential for them to have exclusively earmarked adequate staff for this particular purpose if the projects are to be properly investigated and sent with complete material to provide for a realistic estimate of the cost with proper designs and other details required according to the schedules laid down for the purpose.
3. The expenditure on the regular staff required for investigatory work is covered by the agency charges which are 7½%. In order, however, to assist the State Governments to expedite the investigatory work and to facilitate preparation of the projects quickly. It has been decided to place at the disposal of the State Government for employing exclusive earmarked staff for investigatory work a sum upto 1¾% of the project cost as *initial* payment towards the 7½% agency charges to be adjusted against those charges as and when a project is technically approved and financially sanctioned. This is in addition to the field costs, covering work charged establishment Khalasies, field equipment, stationery for project work, transport cost for surveys, etc. which is already normally sanctionable under a regular field survey estimate. The amount for such field costs for National Highway works has been assessed to be upto about 1 per cent of the estimated cost of project.
4. I am to request that in order to enable the Government of India to accord necessary financial sanction to the provision of funds for this *initial* payment for investigatory works pertaining to 4th plan National Highway works @ 1¾% of the project cost to be adjusted subsequently against approved agency charges, detailed estimate (s), as may be necessary, may kindly be submitted to this Ministry indicating the works to be investigated and the cost of staff to be employed for that purpose.

No. NHIII-33 (13)/72

Dated the 24th Sept., 1975

To

All State Governments
(Departments dealing with National Highways)

Subject : Agency Charges in respect of National Highway works

I am directed to invite a reference to the Ministry of Transport letter No. WI-I (19)/53 dated the 28th January 1954 under which the agency charges payable to the State Governments for execution of National Highway works were fixed at the rate of 7½% of the cost of works. Since then representations have been received from the State Governmets in recent years requesting for increase in the rate of the agency charges. The matter has accordingly been carefully considered by the Government of India. Taking an overall view of the matter including requirement of supervision by officers of the level of Superintending Engineer and above as also increase in the volume of works, the President has been pleased to decide that the existing rate of agency charges for National Highway Works, both original and maintenance works should be raised from 7½% to 9%.

2. The above increase in agency charges shall be admissible from 1st October 1975 on original as well as maintenance works. Payment will be regulated with reference to the figures of expenditure as reflected in the monthly expenditure accounts schedules.

Procedure for adding Centage Charges
(Decision on File No. NHIII/P/18/80 dt. 17.11.80)

First the contingencies should be worked out on the basis of the estimated cost of the work and then the quality control may be calculated on admissible items and added to the estimate, and then the work charged establishments may be calculated on the basis of the total of 3 elements viz. the cost of the work, contingencies and quality control and added to the total estimate. The agency charges may be worked out on the total of the 4 elements and added to the estimate.

No. RW/NH.III/P/18/81

Dated the 6th December, 1984

To,

The Secretaries of all State/Union Territories, P.W.Ds.

Subject : Accounting of expenditure incurred on purchase of petrol, oil and lubricant, repairs of jeeps, purchase of stationery, telephone etc. for NH works

I am directed to say that the Controller of Accounts, Ministry of Shipping & Transport has brought to our notice that certain National Highway Divisions are debiting to the work estimate, the expenditure incurred on purchase of petrol, oil and lubricants, repairs of jeeps, purchase of stationery, telephone etc. The matter has been examined in this Ministry. It has been decided that debiting of such expenditure to work estimates is not a correct charge to the work and has to be met out of the agency charges payable to the executive agencies. These instructions may kindly be brought to the notice of all including Executive Engineers dealing with the Centrally sponsored road/bridge works.

No. RW/NH.III/P/20/83

Dated the 18th Dec. 1984

To

All Secretaries of State/Union Territories PWDs.

Subject : Guidelines on utilisation of the 1% provision allowed in the NH work estimates for quality control.

I am directed to say that this Minsitry has ben allowing 1% of the cost of the NH work in the work estimates to meet the expenses on the quality control staff employed for field work, cost of

equipment, implements/instruments and consumables etc. This Ministry has issued instructions and also detailed guidelines regarding conduct of tests and expected quality standards etc. from time to time. The Indian Roads Congress has also published the Handbook of Quality Control for construction of Roads and Runways (IRC special publication No. 11).

2. However it has been observed that some of the items of expenditure being charged presently to the quality control provision have no relevance to the quality control. It has been found necessary to exercise proper control in this regard so that the funds meant for quality control are used appropriately.
3. This Ministry has therefore, formulated the guidelines indicating the items of expenditure which can be charged to the provision of 1% for quality control provided in National Highway work estimates. A copy of the guidelines is enclosed for compliance. These guidelines may please be followed scrupulously in future and brought to the notice of all concerned for compliance.

GUIDELINES ON UTILIZATION OF THE 1 PER CENT PROVISION ALLOWED IN THE NH WORK ESTIMATES FOR QUALITY CONTROL

Quality Control on the highway works is an integral part of the sound construction management system. The rates of individual items of work in the estimates sanctioned by this Ministry in respect of the NH works include to some extent an element of exercising quality control on works. However, to ensure assurance of quality during execution through tests and checks, this Ministry has been allowing 1% of the cost of the work. This is to meet the expenses on the quality control staff employed for field work, cost of equipment implements/instruments and consumables etc. This Ministry from time to time has issued instructions and detailed guidelines regarding conduct of test and expected quality standards etc. the Indian Roads Congress has also published the Handbook of Quality Control for Construction of Roads and Runways (IRC Special Publication No. 11)

- 2.1. It has been observed that some of the items of expenditure being charged presently to this provision have no relevance to the Quality Control and it is felt that unless proper care and control are exercised in this regard, quality of the work is likely to be affected adversely. It has hence been decided to lay down guide-lines as to the items of expenditure which can be charged to the provision of Quality Control. These are as follows :

- (i) **Staff** : The main supervisory staff shall be from the organisation set up. The quality control field staff specifically recruited/hired/transferred/shared for the specific job or the project for assisting in collection/preparation of samples, conduct of tests, movement of materials/ implements/equipment, etc., depending upon the size and magnitude of the work, can be charged to this provision.
- (ii) **Field Laboratory** : Cost of the new equipment/implements or the book value if transferred from other work (s) or hire charges and maintenance charges including the cost of setting up the field laboratory.
- (iii) **Consumables** : Cost of the consumables like oil, chemicals, reagents, filter papers and others used for testing the samples and running the laboratory.
- (iv) **Testing Charges** : The specialised testings which cannot be done by field laboratories as far as possible, shall be got done through the State, Central or other authorised and approved laboratories. The actual payments made in this regard can be charged.
- (v) **Transportations** : Transportation and movement charges for the samples, equipment, staff, etc., in respect of the quality control of the work/project.
- (vi) **Credit for the Salvage/book value of the equipment, materials, implements etc.**
The credit for the residual value of the usable equipments, implements, materials, etc., which were originally charged to a particular work, determined as per prevailing practice shall be given to the work estimate on completion of the work.
- (vii) **Expenditure incurred on training of field level staff.** The objective of the training being
 - (a) familiarisation with the specifications
 - (b) knowledge of correct sampling procedure
 - (c) learning testing methodology.

- (viii) Expenditure on experimental work for effecting location specific improvements in materials and techniques.
- 2.2. **Accounting** : The details of the account under this account head shall be maintained separately as is being done in case of the main work, contingencies and work charged establishment and the expenditure shall be debitabe on actual basis.

121.4 PROCEDURES FOR SUBMISSION OF CASES TO MINISTER, MOF PIB EFC & WORLD BANK

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
121.4.1	1-O&M (27)/56 dt 15.11.58	Classification of Cases Requiring Submission to Minister	121.4/1
121.4.2	O.O.No. 50/68 dt 16.5.68	Cases to be Submitted to Minister	121.4/1
121.4.3	SR-18 (8)/67-Pt dt 7.10.68	References to Minister/ Deputy Minister	121.4/2
121.4.4 121.2	NHI-46 (5)/70 dt 28.7.70	Note for Finance Division	See Code No. 121.2
121.4.5	NHIII/P/16/78 dt 3.6.78	Submission of Cases to Expenditure Finance Committee — Instructions regarding	121.4/2
121.4.6	NHIII/P/16/78 dt 8.9.78	—do—	121.4/5
121.4.7	NHIII/P/16/78 dt 10.11.78	—do—	121.4/7
121.4.8	NHIII/P/16/78 dt 17.4.80	—do—	121.4/7
121.4.9	NHIII/P/16/78 dt 27.5.80	Submission of Cases to Expenditure Finance Committee/ Public Investment Board-Clarification in Respect of Procedure for Obtaining Approval of the Board.	121.4/7
121.4.10	NHIII/P/16/79 Pt dt 31.7.80	Expenditure Finance Committee- Improvement in Procedures to Speed up Investment Decisions- Instructions Regarding Upward Revision of Cost Estimates of Project	121.4/10
121.4.11	RW/NHIII/P/32/77 dt 27.1.81	Submission of cases to Minister- Fixation of Monetary Ceiling of Estimates for NH Projects other Central Road/Bridge Works Regarding	121.4/11
121.4.12	RW/NHIII/P/15/78 dt 14.7.81	Expenditure Finance Committee/ Public Investment Board Procedure Regarding	121.4/11
121.4.13	NHIII/P/16/78 dt 1.9.81	Expenditure Finance Committee- Procedure Regarding	121.4/12
121.4.14	1(8)/PF-II/81 dt 3.11.81	Expenditure Finance Committee Revision of Instructions	121.4/14
121.4.15	NHIII/P/16/78 dt 31.3.82	Clearance/approval of Public Investment Board-Procedure regarding	121.4/14
121.4.16	NHIII/P/16/78 dt 21.5.82	—do—	121.4/15
121.4.17	FW/10 (77)/TFI/82 dt 4.10.82	Issue of Sanction for Proposals Cleared by the Expenditure Finance Committee	121.4/16
121.4.18	NHIII/P/16/78 dt 21.9.84	Public Investment Board Procedure & Additional Guidelines	121.4/16

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
121.4.19	NHIII/P/16/78 dt. 12.4.85	Expenditure Finance Committee/ Public Investment Board Procedure Regarding	121.4/22
121.4.20	NHIII/P/16/78 dt. 6.5.85	Clearance of Proposals for Construction of Road/Bridge by Public Investment Board/ Expenditure Finance Committee Instructions regarding	121.4/23

No. 1-O & M (27)/56

Dated the 15th November, 1958

Subject : Classification of Cases Requiring Submission to Minister.

In supersession of the orders issued in this Department's O&M Circular No. 11/57, dated 23rd November, 1957, on the above subject, it has been decided that :

I. in future, irrespective of the subject matter the following types of cases should be submitted to the Minister concerned before final orders are issued :-

- 1) Cases which require submission to the President.
- 2) Cases for Cabinet or Cabinet Committee.
- 3) Cases involving Legislation
- 4) Cases relating to other Parliamentary business, e.g. questions, Resolutions, etc.
- 5) Cases involving or likely to lead to dispute or difficulty with Parliament.
- 6) Cases likely to involve dispute or difficulty with State Governments.
- 7) Cases likely to lead to controversy in the Press or Parliament.
- 8) Cases involving major questions of new policy or change of existing policy.
- 9) Cases where it is proposed to reject the recommendation of the Comptroller and Auditor General, U.P.S.C., Election Commission or other statutory authorities.
- 10) Cases where it is proposed to reject the recommendations emanating from a Minister or a Deputy Minister in some other Ministry.
- 11) Cases of major disciplinary action against class I Officers.
- 12) Cases relating to the appointment of non-Indians to posts under this Department including those in the statutory and autonomous bodies in which this Department has a controlling interests.
- 13) Cases involving financial sanctions for expenditure of Rs 25 lakhs or more.
- 14) Any other cases or class of cases which the Minister wants to be submitted to him or which Secretary/Joint Secretary considers to be of sufficient importance to warrant submission to the Minister.
- 15) Statements of cases disposed of (other than routine cases), etc.
- 16) Cases relating to grant of financial assistance from the Centre for the development of roads, shipping etc.

I. the following types of cases will be submitted to M.S. or Minister at the discretion of Secretary.

- 17) Memoranda on the action taken on the recommendations of the Estimates Committee.
- 18) Cases where the recommendation of the State Government or a head of department is being turned down.

II. the following types of cases will not be submitted to Ministers, unless they have some unusual features. Secretary and Joint Secretaries will exercise their discretion in selecting the cases for submission to the Ministers.

- 19) Cases relating to appointments, transfers and the creation of class I Posts.
- 20) Appeals and Memorials in disciplinary cases where orders have to be issued in the name of the President after consulting the Union Public Service Commission.
- 21) Cases involving financial sanction for expenditure of less than Rs 25 lakhs or in which the original estimate is exceeded by 5%.

O.O.No. 50/68

Dated the 16th May, 1968.

Reference is invited to the orders contained in this Ministry's Office Memorandum No. 1- O & M (27)/56, dated the 15th November, 1958, regarding cases which should be submitted to the Ministers before final orders are issued. While the Office Order makes it clear that certain types of cases must be submitted to the Minister, there are certain other types of cases, e.g. those referred to in items (5), (6) and (7) under para 1 of the Office Memorandum, where the officer concerned has to exercise his judgement and indicate whether the case requires submission to the Minister. Officers of the rank of Deputy Secretary and above should keep this in view and take orders whether any such case should be submitted to the Minister. The Officers will be held responsible for the strict observance of the instructions contained in the O.M. referred to above.

No. SR-18 (8)/67-Pl

Dated the 7th October, 1968

Subject : Reference to Minister/Deputy Minister.

It has been decided that in case where a reference has been received/addressed to Minister or Deputy Minister with regard to sanctioning a particular work, it is necessary to submit the file to them before the sanction for that work is issued, so that a reply to the reference already addressed to the Minister or Deputy Minister, is disposed of first before official sanction is actually communicated to the State Government concerned.

No. NHIII/P/16/78

Dated the 3rd June, 1978

To,

All Officers of S.E.'s rank and above/Under Secretaries/
Desk Officers/All Sections in the Roads Wing

Subject : Submission of cases to Expenditure Finance Committee — Instructions regarding

A copy of the minutes of the meeting held on 9.5.1978 in F.A.'s Chamber, on the subject mentioned above, is circulated to all officers and sections in the Roads Wing. In pursuance of the decision taken in the meeting, all schemes (original estimates) costing more than Rs one crore are required to be submitted to Expenditure Finance Committee for approval. In this connection, a copy of the following communications, giving details of the procedure to be followed for submission of cases to Expenditure Finance Committee, is enclosed :

- (i) O.M.No.F-3(2)-E(Coord)/67, dated 1.6.1968 from the Ministry of Finance to all Ministries etc.;
- (ii) O.M.No.3(1)-E(Coord)/76, dated 15.9.1976 from Ministry of Finance to all Ministries etc.;
- (iii) Form of the Memo for expenditure Finance Committee for proposals involving expenditure in new service or new instruments of service, in terms of instructions issued by Budget Division on expansion of existing services costing over Rs one crore (non-recurring) or Rs 20 lakhs per annum(recurring), and
- (iv) Memo of instructions for filling up the EFC Proforma.

Enclosures to circular No. NHIII/P/16/78 dated 3.6.78

DRAFT MINUTES ON DISCUSSIONS HELD ON 9.5.78 IN F.A.'s CHAMBER ON THE REQUIREMENT OF EFC APPROVAL IN RESPECT OF ROAD/BRIDGE SCHEMES COSTING MORE THAN RS 1 CRORE.

The matter regarding necessity of E.F.C. approval to Road/Bridge Scheme costing more than Rs. one crore was discussed in a meeting held in F.A.'s chamber on 9.5.78 at 11 A.M. From the Roads Wing side, the DG(RD) & Additional Secretary/Chief Engineer, Superintending Engineer concerned and US (Budget) were present. Besides the Director (Finance), the Controller of Accounts was also present.

2. While opening the discussion, the DG(RD) and Additional Secretary explained that in the case of National Highways (Road/Bridge) schemes, a thorough examination is done by the Planning Commission, Ministry of Finance and by Transport Ministry at the stage of finalisation of the Five Year Plan/Annual Plans, at the time of finalising the list of inescapable works and at the stage of finalising budget proposals, when a complete picture is given in respect of a scheme and the investment required for it.

Historically speaking, the DG(RD) & Additional Secretary related that the necessity of E.F.C. approval in the cases of N.H. Schemes had never been emphasized in the past. The whole issue arose when in the meeting held in the Planning Commission to discuss the Central Road Scheme for 78-79, it was mentioned that in cases where the cost of a single scheme is likely to be more than Rs one crore, the approval of EFC should be obtained. The Roads Wing sought clarification in this regard suggesting that the approval of EFC should be obtained if the scheme had not already been sanctioned and provided for in the Budget Estimates. On this the Planning Commission issued a circular informing that "in case where the cost of single scheme is likely to be more than Rs one crore, the approval of EFC/PIB should be obtained if the scheme has not already been sanctioned and provided in the Budget Estimates."

3. D.G. (RD) stated that he reacted immediately in the meeting of the Planning Commission, when the above observation was made, the minutes were recorded accordingly. He further added that every Project has to be planned in a manageable, operative manner and from the point of efficiency and capacity etc. It is difficult to undertake a work on one N.H. from Delhi to Calcutta which will not only be difficult and time consuming, but also unwieldy and impracticable from the efficiency point of view. He cited Assam Highways case in which many cases have cropped up for litigation. Contractually, it is also difficult to manage a single work of considerable length. It is, therefore, necessary that the NH is divided into sections of manageable lengths for undertaking various works of strengthening, widening etc. etc.
4. At this, FA stated that he remembered a case in which a NH Project had been split up into five different works, although the scheme is one. DG(RD) stated that if this view is taken, many cases will have to be referred to EFC for approval which will require more time and consequently there will be delay in NH activity and the progress will slow down. FA desired to know as to how many schemes costing more than rupee one crore are processed by Roads Wing in a year. He further desired that the original scheme should not be split up or tampered with so as to bring it down thereby avoiding EFC approval. Replying to this, the DG(RD) stated that about two to three dozens projects schemes are referred to Roads Wing during a year which are more than rupee one crore. He further added that in no case the scheme have been split up or tampered with.
5. Concluding the discussions FA desired that schemes costing more than Rs 1 crore should be referred to EFC for approval.
6. As regards Revised Cost Estimates, FA was of the view that all cases involving excess of more than Rs. 1 crore may not be submitted to EFC, but approval of Secy (E) may be obtained on file.
7. Feasibility Report was also not felt necessary in the cases of Roads and Bridges as the question of economic viability is not involved in such projects once the inescapability of the project has been accepted by the Planning Commission.

Copy of O.M.No. F. 3 (2)-E (Coord) 67 dated 1st June, 1968 from Ministry of Finance (Department of Expenditure) to all Ministries etc.

Sub:— Expenditure Finance Committee-Revision of Procedure.

The undersigned is directed to refer to the Department of Expenditure O.M.No.F. 3 (1)-E (Coord) 66 dated the 23rd April 1966 on the above subject and to state that in modification of the instructions contained therein, it has been decided to revise the constitution of, and the procedure relating to, the Expenditure Finance Committee as follows :—

I. CONSTITUTION OF THE COMMITTEE :

- (i) Finance Secretary;
- (ii) Secretary (Expenditure)
- (iii) A representative of the administrative Ministry/Department concerned not below the rank of a Joint Secy.
- (iv) Financial Adviser concerned with the Ministry sponsoring the proposal. (He will function as the Secy. of the Committee for the particular meeting).

The meeting will be presided over by the Finance Secy. or Secretary (Expenditure) according to as the proposals concern either on them. Where the subject matter of the proposal calls for it, the Joint Secy. (Per.) in the Expenditure Department who is in charge of the Establishment Division and S.I.U., the Joint Secretary (Plan Finance) in the Expenditure Department who deals with the State Finance as also the Joint Secretary (Budget) in the Economic Affairs Department may also be invited.

II. TYPES OF CASES TO BE REFERRED TO THE COMMITTEE.

The following types of cases will require submission to E.F.C.

- (a) All proposals involving expenditure on a new service irrespective of the amount involved;
- (b) All proposals for expansion of existing services involving an expenditure of over Rs 50 (lakhs non-recurring and/or over Rs 10 lakhs per annum recurring).

Note :

- (i) Sanction of E.F.C. will be necessary even if the expenditure involved in a proposal is in the form of a loan ;
- (ii) Proposals relating to the Autonomous Bodies, (other than industrial and Commercial Projects), when received for Government's approval in accordance with the rules and regulations of the Body will also require a reference to the Committee if the expenditure involved exceeds the above limits:

- (iii) In the case of proposals relating to the industrial and Commercial Projects, in view of the separate detailed procedure laid down by the Bureau of Public Enterprise for their scrutiny and sanction, it will not be necessary to seek the approval laid down does not cover the type of proposals under consideration.

(c) Any other proposal or policy which the heads of Divisions may like to consider in the Committee.

III. PROCEDURE :

The proposals should as usual be forwarded to their Financial Advisers by the Ministries in the revised form (vide Form 'A' at Appendix I) with 12 spare copies along with the relevant supporting documents. The E.F.C. Memo. should as far as possible be submitted over the signature of the Secretary to the Department concerned, otherwise an indication would be given that the Memo. has received the approval of the Secretary to the Department. If in the light of the nature of the scheme and the information available in the E.F.C. Memo and the relevant file, the Finance Secretary/Secretary (Expenditure) feels that no formal meeting of E.F.C. is necessary, the decisions reached on the file will be communicated to the Ministries as usual. The procedure will apply in the case of proposals referred for expenditure sanction both at the pre budget and post budget stages.

2. It will not hereafter be necessary to submit to Expenditure Finance Committee the proposals or supplementary grants for expansion of existing services involving an expenditure exceeding Rs. 20 lakhs (non-recurring or Rs 6 lakhs per annum recurring) unless the expenditure relates to new instrument of service. It will also not be necessary to submit the E.F.C. cases of supplementary grant where larger amounts than Rs 25 lakhs (non-recurring) and Rs 5 lakhs (recurring) are involved but the criteria of new service new instrument of service and expansion of existing service are not attracted. The Ministries should send such proposals to their Associate Financial Adviser in the revised form (vide Form 'B' at Appendix II to his O.M.). If, after due scrutiny, the proposals are acceptable to the F.A. concerned, he will forward the same to the Joint Secretary (Budget) in the Department of Economic Affairs for further necessary action. Any case involving special features may at the discretion of the Finance Secretary, as the case may be, before it is referred to the Joint Secretary (Budget).
3. The Ministry of Home Affairs, etc. are requested kindly to note the revised procedure indicated above and also circulate it to all concerned under them.

COPY OF O.M. NO. 8 (I) E (COORD) 76 DATED THE 15TH SEPTEMBER 1976 FROM MINISTRY OF FINANCE DEPARTMENT OF EXPENDITURE TO ALL MINISTRIES ETC.

Subject : Expenditure Finance Committee Revision of procedure.

The undersigned is directed to refer to the Department of Expenditure O.M. No. F. 3 (1) E (Coord) 72 dated the 18th December, 1972 and to state that it has been decided to raise the existing monetary limit beyond which reference to the EFC is necessary, from Rs 50 lakhs non-recurring and or Rs 10 lakhs per annum recurring to Rs 1 crore non-recurring and/or Rs 20 lakhs per annum recurring. For the purpose of applying the limit of Rs. 1 crore, the entire cost of the scheme upto the date of completion (both recurring and non-recurring), as defined in Rule 11 (2) of the Delegation of Financial Powers Rules, shall be taken into account. The existing practice of clearance of proposals on file where there is substantive agreement between the administrative Ministry and the Finance Ministry, shall also continue.

2. The expenditure Finance Committee will hence forth also include representatives of the Planning Commission and the Department of Economic Affairs. In addition the Chairman of the Committee also invite experts and representatives from other Ministries, as required.

MEMORANDUM FOR EXPENDITURE FINANCE COMMITTEE FOR PROPOSALS INVOLVING EXPENDITURE IN NEW SERVICE OR NEW INSTRUMENT OF SERVICE IN TERMS OF INSTRUCTIONS ISSUED BY BUDGET DIVISION OR EXPANSION OF EXISTING SERVICE COSTING OVER RS ONE CRORE (NON RECURRING) OR OVER RS 20 LAKHS PER ANNUM (RECURRING)

GOVERNMENT OF INDIA
MINISTRY OF _____
DEPTT : OF _____
NEW DELHI, the _____

MEMORANDUM

- I. Statement of proposal
 - a) Title of the proposal/scheme
 - b) Description of the proposal/scheme and its objects.
 - c) Justification for the proposal/scheme and what alternative have been considered.

- (d) Description of the manner in which the proposal/scheme is proposed to be implemented including mention of the agency through which the scheme will be executed.
- e) Schedule of programme and target date of completion.
2. Financial implications of the proposal
 - a) Nature of the scheme (Plan-Central or Centrally sponsored or non-plan)
 - b) Total outlay (recurring and non-recurring separately) its broad details & its year wise phasing.
 - c) i) Plan allocation, if a plan Scheme; and ii) Budget provision in the current financial year, if no budget provision exists how is the expenditure proposed to be met?
 - d) Foreign exchange component of the outlay and how it is proposed to be met.
 - e) Component of grant, loan and subsidy, if any, in the total outlay involved and their proposed terms.
 - f) Number of posts, their pay scales and the basis adopted for staffing (statement attached)
 - g) Broad details of construction works, their justification and basis of estimates (Statement attached)
 - h) Requirement of stores and equipment together with justification and costs (Statement attached)
 - i) Achievement/return expected and other economic implications, if any.
3. a) Comments, if any, of the Planning Commission (For Plan scheme only)
b) Comments, if any, of other Ministries/Depts. which may have been consulted.
4. Supplementary information, if any.
5. Points on which decision/sanctions are required

Secy. to the Govt. of India
Ministry of _____
Department of _____

MEMORANDUM OF INSTRUCTION FOR FILLING UP THE E.F.C. PROFORMA

1. The proposals to be submitted to the Expenditure Finance Committee should clearly spell out the object of the scheme, manner of its implementation, financial implications, the target date for the completion of the scheme, returns expected — financial economic, etc, the views of the Planning Commission and the other Ministries etc. The proforma has been devised with the object of bringing out all the relevant information at one place to facilitate consideration of a scheme by the Committee.
2. In the case of a particular scheme, it is possible that some of the items mentioned in the proforma may not be applicable, e.g. in the case of a scheme for employment of teachers for Primary Schools which has a social objective and is not expected to yield any financial return, items 2 (d), 2 (g) 2 (h) etc. will not be applicable. Wherever any item of the proforma is not applicable, it may be so indicated.
3. If answer against any particular item is already covered or will be covered by the answer against another item, it is not necessary to repeat the answer under both the items. It will be sufficient if the answer is given under one item and reference thereto is made against the other relevant item. For instance, if the benefits arising out of a scheme are indicated in item 1(c) as part of the justification, it is not necessary to repeat the same in col. 2(1) as part of achievement/return expected.
4. In respect of col. 1(e) only the phasing of the physical programme and the targets need be given and not the phasing of the outlay on the scheme which will be covered by item 2 (h).
5. In respect of col. 2(i), it is not the intention that the achievements and returns should be indicated only in financial terms. Special or other benefits, if any, accruing from the scheme may also be indicated.
6. In the case of items of repetitive nature, reference may be given to any proposal of the same nature approved earlier by the E.F.C. In such a case, all the columns need not be filled up. Only the points relevant to the repeat programme should be indicated.
7. In respect of Plan schemes, it is expected that the approval of the Planning Commission should have already been obtained by the administrative Ministry before the proposal is sent to the Associate Finance for submission to the E.F.C. In case Planning Commission's approval has not been obtained, a special mention of this may be made against item 3(a).

1214.6

No. NHIII/P/16/78

Dated the 8th September, 1978

Subject : Submission of cases to Expenditure Finance Committee — Instructions regarding — Procedure for processing of Revised Estimates costing Rs. 1 Crore and above.

Attention is invited to para 6 of the Minutes of the Meeting held on 9.5.1978 in which it was decided to circulate wide NHIII Section Circular No. NHIII/P/16/78 dated 3.6.78. A copy of D.O. No. NHIII/P/16/78 dated 30.8.78 together with enclosure received from Shri A.B. Datta, Min. Secy. to the Govt. of India, (Plan & Development) & Addl. Secy. in regard to the same is enclosed for information.

disposal of Revised Estimates costing Rs. 1 crore and above is circulated for guidance and further necessary action.

To, All Technical Officers of the rank of Executive Engineers and above/DS (P & B)
DS (R)/All under Secretaries/D.O.II/D.O.III/All Sections in the Roads Wing

Enclosure to Circular No. NH III/P/16/78 dt. 8.9.78

Copy of letter No No.F. 9 (5)/-TF. II/78 dated the 30th August 1978 from the Financial Adviser, Ministry of Shipping & Transport (Transport Wing), New Delhi to DG (RD) & Addl. Secy.

As you are aware, the question regarding level at which approval should be accorded in the Finance Division to revised estimates of roads/bridge works costing more than Rs. 1 crore, has been under consideration for some time past.

2. Normally, such cases require approval of EFC. However, in the above type of cases, it has been decided, with the approval of Secy. (E) that each such proposal may be put up to him on file. Wherever considered necessary, Secy. (E) may like to discuss the proposal at the EFC meeting.
3. For the purpose of facilitating submission of such cases to Secy. (E) a proforma of a self contained note to be placed on file by the Roads Wing, is enclosed herewith. I shall be grateful if you could kindly ensure furnishing of comprehensive data in each case as in the proforma.

PROFORMA FOR SELF CONTAINED NOTE SEEKING APPROVAL TO REVISED ESTIMATES OF ROADS/BRIDGES WORKS INVOLVING EXPENDITURE EXCEEDING RS. 1 CRORE.

1. Proposal in brief

The proposal is for sanctioning revised estimate for Rs ____ for (name of work, including length of the stretch may be indicated).

2. *Scope of the work* (Give full details regarding the scope when the original estimate was sanctioned and whether the revised estimate involves change in scope of work. If there is change in scope of work, was Finance Ministry's approval obtained).

3. Particulars of the original estimate

- (a) Amount sanctioned
- (b) Schedule of rates on which the estimate was based
- (c) Date of sanction.
- (d) Traffic data.
- (e) Level of approval
- (f) Expected date of completion.
- (g) Date of commencement of the work.
- (h) Physical progress of work
- (i) Upto-date expenditure. If expenditure incurred in excess of sanctioned estimate reasons therefor and whether responsibility has been fixed.

4. Particulars of revised estimate

- (a) Amount proposed.
- (b) Traffic data
- (c) Schedule of rates on which revised estimate is based.
- (d) Excess.
- (e) Expected date of completion, as per revised estimate.
- (f) Delay in execution, its detailed reasons.

5. Excess over the original estimate, its break-up under the following head :

- (1) Omission and under-estimation
- (2) Change in scope.
- (3) Escalation of rates
- (4) Centage charges

Detailed reasons for excess under each appropriate Head e.g. earthwork, land acquisition, materials stores, etc. etc.

6. *Was capital expenditure incurred earlier on the same stretch of road. If so, detailed particulars regarding expenditure incurred, date of sanction, date of completion of work etc. may be furnished*

121.4.7

No. NHIII/P/16/78

Dated the 10th November, 1978

Subject : Submission of cases to Expenditure Finance Committee — Instructions regarding
— Procedure of Revised Estimates costing Rs 1 crore and above

In continuation of this Ministry's endorsement of even number dated the 8th September, 1978, on the subject noted above, a copy of the D.O. letter No. F. 9 (5)/TFII/78, dated the 1st November, 1978 from Shri A.B. Datar, Financial Adviser addressed to Shri J.S. Marya, Director General (Road Development) and Addl. Secretary is circulated herewith to all concerned for strict compliance of the instructions contained therein.

Enclosure to circular No. NHIII/P/16/78 dt. 10.11.78

Letter No. F. 9 (5) TFII/78, dated the 1st November, 1978 from Financial Adviser, Ministry of Shipping and Transport (Transport Wing), New Delhi to Director General (Road Development) and Addl. Secy. to the Govt. of India.

Kindly refer to my D.O. letter of even number dated the 30th August, 1978 regarding submission of proposals relating to revised estimates of roads and bridge works costing more than Rs 1 crore in the proforma prescribed by us for the purpose.

2. It is noticed from a few files received by us that the Roads Wing are furnishing information in the prescribed proforma separately on file, instead of furnishing it in the last referring note. This necessitates duplication of effort on our part by bringing out all the data in our note. In order to avoid this, I shall be grateful if you could kindly ensure furnishing of comprehensive data in each case, in the last referring note.

121.4.8

No. NHIII/P/16/78

Dated the 17th April, 1980

Subject : Submission of cases to Expenditure Finance Committee — Instructions regarding
— Procedure of revised estimate costing Rs 1 crore and above

In an inter-departmental meeting held under the Chairmanship of Secretary (E) on 19.12.1979 to discuss matters relating to cost/time over run on National Highway works it was *inter alia* decided that cases where the revised cost of work may be over Rs 1 crore and expenditure has been incurred beyond the permissible limit, the file should be put up to the Minister for Shipping and Transport and Finance Minister for orders. It has since been decided in consultation with the Finance Division that such cases may be put up to Minister for Shipping and Transport only after these have been cleared by the Finance Division. After obtaining the approval of Minister for Shipping and Transport the file may be referred to Finance Division again for obtaining the orders/approval of Finance Minister.

121.4.9

No. NHIII/P/16/78

Dated the 27th May, 1980

To,

All Technical Officers of the rank of S.E. DS(P&B)/DS(R)/All Under Secretaries/D.O.II/D.O.III/all sections in the Roads Wing.

OFFICE MEMORANDUM

Subject : Submission of cases to Expenditure Finance Committee/Public Investment Board — Clarification in regard to the procedures for obtaining approval of the Board

A copy of the Ministry of Finance (Department of Expenditure) O.M.No. F.1 (80)/PF-II/78 dated 2nd April 1980 is circulated herewith for information/guidance.

COPY OF O.M.NO.F. 1 (80)/PF-II/78. DATED THE 2ND APRIL, 1980 FROM THE MINISTRY OF FINANCE (DEPTT. OF EXPENDITURE) NEW DELHI. ADDRESSED TO ALL MINISTRIES/DEPTTS. OF GOVT OF INDIA AND OTHERS.

Subject : Public Investment Board/EFC — Clarifications in regard to the procedures for obtaining approval of the Board.

The undersigned is directed to say that clarifications have been sought from time to time on certain points relating to the procedure to be followed for obtaining approval of the EFC/PIB for investment decisions. The points raised have been examined in detail and the position is clarified as under :

1. Criterion for deciding the forum — EFC or PIB — for projects which are not of a commercial nature.
 - 1.1. **In accordance with the existing orders, EFC considers schemes/programmes/projects costing Rs 1 crore and above but less than Rs 5 crores. The PIB, on the other hand, takes investment decisions on proposals costing Rs 5 crores or more for public investment to produce goods and to provide services. In actual practice, however, a decision as to whether a particular scheme costing even more than Rs 5 crores requires a reference to the PIB or not is taken on merits keeping, amongst others, the following factors in view :-**
 - (1) **Whether the scheme can lend itself to appraisal with reference to demand, choice of technology, location, economic and financial return;**
 - (2) **Whether the scheme will be financed by grants/loans or subsidies with a very small component attributable to buildings, equipment, etc.**
 - (3) **Whether the scheme involves capital investment.**
 - 1.2. **It has been decided that as it is not possible to lay down criterion covering all types of cases, the present flexible practice of deciding individually whether EFC or PIB should be the forum for approval should continue.**
 - 1.3. **In the case of large programmes, which are difficult to break down into separate identifiable projects, the total expenditure in a Plan period incurred by the Central and State Governments on a scheme included in Plan, should be regarded as the criterion for deciding whether approval of the EFC/PIB will be necessary. This will also hold good in the case of schemes continuing from earlier plan periods and spilling over to the next plan. In the case of specific identifiable schemes/projects, however, the total estimated cost of the scheme/project itself (and not the expenditure in a Plan period) should be got approved by the EFC/PIB.**
 - 1.4. **It may be stated for information that all recurring expenditure like staff costs, contingencies etc. upto the date of commissioning of the scheme or project should be included in the amount of or which approval of EFC/PIB is sought. Also schemes/projects with (a) non-recurring expenditure between Rs 1 and 5 crores (b) recurring expenditure more than Rs 20 lakhs per annum, and (c) staff costs more than Rs 10 lakhs per annum in the case of plan schemes and Rs 5 lakhs per annum in other cases, require approval of EFC.**
 - 1.5. **Interest during construction of a project should also be included in the capital cost of the project to be approved by EFC/PIB.**
2. **Need for obtaining clearance of EFC/PIB for renewals and replacements of plant and machinery including capital repairs.**

It is clarified that expenditure proposals for renewals, replacements and repairs on items included in the approved programme for renewals and replacements (and for which provision is made in the budget) of the undertaking concerned are not to be referred to the EFC/PIB. Other expenditure proposals not covered by this exemption should continue to be referred to EFC/PIB for investment decisions. It should be ensured that all cases where there is substantial change in scope, should be brought up before EFC/PIB, as the case may be.

3. Stage at which PIB approval should be sought in respect of projects assisted by the World Bank.
 - 3.1. **At present, projects to be assisted by the World Bank are discussed in a series of inter-departmental meetings with which the Planning Commission, Department of Expenditure, Administrative Ministries and the Financial Advisers concerned are fully associated. The World Bank representatives are also associated at an appropriate stage before completion of the appraisal of the project by the World Bank and submission of the report thereon. The**

parameters of the project do not, in some cases, however, get settled until half-way during the discussions. In this context, a question has been raised whether the approval of the EFC/PIB for a project should be sought before it is taken up for discussion and appraisal by the World Bank or after appraisal of the Project by the World Bank.

- 3.2. It should be noted that in such cases the Project gets a concrete shape only during the course of discussions with the World Bank representatives as stated above. It has, therefore, been decided that it would neither be useful nor feasible to seek the clearance of the EFC/PIB at a stage prior to commencement of discussions with the World Bank representatives. The administrative Ministries should keep their Financial Advisers intimately associated with the formulation of and in all important discussion on such projects. Based on the progress in the inter-Departmental meetings, the Financial Advisers should advise the Secretary of the Administrative Ministry and initiate timely action to seek the approval of the EFC/PIB for the Projects.

4. With a view to streamlining the EFC/PIB procedures, the following instructions are also circulated :

Role of F.A. in processing of EFC/PIB cases

- 4.1. Under the IFA system introduced in most of the Ministries in 1975, the FA of the Ministry should be associated in the formulation of all schemes and projects, right from the beginning. It is, however, observed that some Ministries prepare EFC/ PIB proposals without consulting the FA, circulate them to all the appraising agencies, and endorse copies to the FA also for his comments. This practice is not in accordance with the spirit of the IFA system. The Ministries where IFA system has been introduced are, therefore, requested to formulate and process expenditure proposal for EFC/PIB, in close association with their FAs and circulate for appraisal only the proposals as concurred in by the FA or alternatively include and discuss FAs comments in the draft EFC/PIB memorandum circulated for appraisal. Once such proposal get evolved in association with the FA in this manner, the appraising agencies can offer really substantive and major comments, without covering the area normally looked into by the FA.

Note for the Public Investment Board/E.F.C.

- 4.2. It has been observed that no uniform practice is being followed at present by the Ministries in the preparation of the note for circulation amongst the members of the PIB/EFC. While some Ministries prepare a single note including therein the comments of their FA, other Ministries and their FAs prepare separate notes for circulation. Many a time the comments of appraising agencies and replies thereto of the Ministries are also appended to PIB/EFC memorandum. This causes inconvenience to the members as they have to go through long and sometimes contradictory notes which makes identification of real issues difficult. The administrative Ministries etc, therefore, requested to prepare, after receiving comments from all appraising agencies a comprehensive, self-contained but brief note which should contain the salient features of the project and deal with the comments of the FA and appraising agencies so that all the relevant details of the finalised proposal are available at one place. If essential, the comments of a particular appraising agency may be dealt with briefly in the PIB/EFC note of the administrative Ministry and details etc. incorporated suitably in annexures. The fact that the note has been seen by the FA and the Secretary of the Administrative Ministry should invariably be indicated in the concluding paragraph thereof.

Time-limit for furnishing comments

- 4.3. In order to ensure speedy finalisation of schemes/projects, it is essential that the appraising agencies associated with the processing of investment proposals finalise their comments and communicate the same to the sponsoring Ministries within a reasonable time-limit. For this purpose, a time-limit of 15 days in EFC cases and one month in PIB cases has already been prescribed vide para 3(ii) of this Ministry's O.M. No. F. 1 (18)/PF-II/78 dated the 23rd Nov. 1978. However, the aforesaid time-limit will apply from the date on which complete information required for appraisal of a scheme/projects is furnished as explained in this Ministry's O.M. No. F.1 (18)/PF-II/78 dated the 1st Feb. 1979. The administrative Ministries etc. are requested to note the above position so that the examination of the schemes etc. is completed as quickly as possible.

Nodal section to issued orders on EFC procedure

- 4.4. So far E(Coord) Section has been issuing orders on the procedures relating to EFC. Since it is essential to retain as much uniformity as possible in the procedures applicable to both EFC and PIB cases, Plan Finance-II section has taken over from E(Coord) the responsibility for issuing

instructions of EFC procedure. This change may be noted and communications on this subject may be addressed in future to plan Finance-II Section of the Plan Finance Division in the Department of Expenditure.

5.9. Ministry of Agriculture etc. are requested to note these clarifications/instructions and also bring them to the attention of the Public enterprises under them in a suitable manner.

6. Hindi translation of the O.M. is being issued separately.

121.4.10

No. NHIII/P/16/79-Pt.

Dated the 31st July, 1980

Subject : Expenditure Finance Committee-Improvement in procedures to speed up investment decisions-instructions regarding upward revision of cost estimates of projects

A copy of Plan Finance Division O.M. No. F. 1 (18) PF. II/78 dated the 23rd November, 1978 and number F. 1 (8) PF. II/80 dated the 31st May, 1980 from Ministry of Finance Department of Expenditure, Plan, Finance Division are circulated herewith for guidance and necessary action.

It has been decided in consultation with the Finance Division that where any investment decision is taken on the basis of preliminary estimates, the administrative approval of the Ministry should be communicated to the State Government as soon as the approval of the EFC and Finance Minister is obtained. The technical approval and financial sanction to the detailed estimate may be issued subsequently or simultaneously on the basis of firm up cost in accordance with the instructions contained in the OMs referred to above.

Enclosure to circular No. NH III/P/16/79-PT dt. 31.7.80

O.M. No. F. 1 (18)/PF-II/78 dated the 23rd November 1978 from Ministry of Finance Department of Expenditure Plan Finance Division to All the Ministries/Departments of the Government of India etc.

Subject : Improvement in procedures to speed up investment decisions

Government have been greatly concerned over the delays in consideration and implementation of projects and while approving the revised cost estimates of a project recently, the cabinet took serious notice of the fact that the expenditure over the originally sanctioned amount had been incurred without obtaining the approval of the cabinet and that expenditure sanctions had also been issued without obtaining the approval of the appropriate authority with the result that the cabinet was faced with a fait accompli. The cabinet has directed that such a situation must not be allowed to recur in future, and that the Ministry of Finance may evolve suitable procedures for this purpose.

2. The matter has been examined in detail by the Ministry of Finance with a view to ensure speedy sanction and implementation of projects. Recently orders have been issued by the RPS vide BPE/1 (64) Adv (F) 78, dated 25th May, 1978 enhancing the delegations of powers to the public sector undertakings for sanctioning capital expenditure. The enhanced powers would enable them to sanction more projects within their own powers speedily, reducing the number of cases that would have to come up before Government for approval. The responsibility now cast on the management of the Public Sector Undertakings for project sanction and execution is all the more greater. Nominated senior officers should be made specifically responsible for the speedy sanction and implementation of the projects by affective monitoring to ensure that the projects sanctioned are implemented within the estimate and approved cost and time frame. Any lapse in this regard should be viewed seriously and suitable action taken.
3. As regards projects beyond the sanctioned powers of the Public Sector Undertakings, the following modifications in regard to the procedure for sanction of projects and their revised costs would be introduced :-
 - (i) A recent review by the PIB of revised cost estimates of certain projects has brought into sharp focus the inadequacies in the techno-economic feasibility reports based on which investment decisions are taken. It is very essential that such reports are prepared carefully covering all essential aspects so that the appraising agencies are not put to difficulty in examining and finalising their comments thereon. A reference is invited to Secretary (E)'s d.o. letter number F. 1 (13) PF-II/78 dated 14th June, 1978 to all Secretaries of Ministries/Departments on this subject.
 - (ii) The appraising agencies who are associated in the processing of investment proposal by EFC/PIB should finalise quickly their comments and communicate them to the Ministries piloting such investment proposals. For this purpose, a period of 15 days in EFC cases and one month in PIB cases from the date of receipt of the feasibility report and/or initial EFC/PIB Memo should be the maximum.

- (iii) In case the initial investment decision is not based on detailed project reports or detailed cost estimates, the concerned Ministries should ensure that these are prepared within a year of the sanction of the project. At that stage, the cost estimates should be firmed up based on detailed engineering, site investigation, concluded agreements for know-how, etc. etc. These detailed project reports of cost estimates should be prepared by the project authorities and examined by the Administrative Ministries in consultation with their Financial Advisers. A revised plan for execution and target date for completion should also be drawn up, if necessary. Such firmed up cost estimates as also revised plans and target dates for completion should be the basis for watching financial and physical progress thereafter on the project and no changes in the basic parameters and scope of the project should be permitted. If such firmed up cost estimates do not exceed by more than 20% the original amount approved through EFC/PIB, a revised expenditure sanction may be issued by the Administrative Ministries without further reference to EFC/PIB. Copies of sanctions issued in such cases should be sent to Plan Finance Division (PF-II) for record. However, if excess is beyond this limit, the cases should be brought up for approval again in the appropriate forum, EFC or PIB.
 - (iv) In case the Administrative Ministry feels that the period of one year may not be sufficient for preparation of detailed project reports/cost estimates, the time required for this purpose should be got settled when proposals are first processed through EFC/PIB.
 - (v) The Ministry concerned while bringing up a case before the EFC/PIB for consideration should clearly pin point the authority responsible for execution and implementation of the projects. The Ministry should ensure that this authority is fully accountable for preparation of detailed project/detailed cost estimates as also for the execution of the project within the cost and time frame and appropriate action taken.
 - (vi) The Ministry concerned, while processing the case through PIB, should clearly indicate the arrangements made by them for monitoring the timely implementation of the projects. The Ministry should ensure that the monitoring system is adequate and strengthened where necessary for exercising effective project control.
4. The Guidelines issued by BPE on management information system vide O.M.-number BPE/GL-003/75/I&R/16 (4) 72 dated 11th March 1975, have emphasised that Ministries should hold quarterly Performance Review Meetings. The Ministries concerned may consider whether it would be useful and advantageous to nominate a senior officer in the Ministry who would be specifically responsible for regularly monitoring the progress on the projects of the Ministries for execution within the approved cost and time frame.
5. Ministry of Agriculture, etc. are requested to note these instructions and issue appropriate further instructions to their subordinate formations as also public sector undertakings under their administrative control for strict compliance.

121.4.11

No. RW/NHIII/P/32/77

Dated the 27th Jan., 1981

To

All Technical Officers of the rank of Superintending Engineer and above.

DS (P&B)/DS (R)/All Under Secretaries/Desk Officers/ All Works Sections in the Roads Wing

Subject : Submission of cases to Minister-Fixation of monetary ceiling of estimates for National Highway Projects/other Central Road/Bridge works regarding

In supersession of this Ministry's Circular letters of even number dated the 31st May, 1978 and 14th July, 1980 on the subject mentioned above, it has been decided that all cases of estimates and tenders involving expenditure exceeding Rs 25 lakhs and upto & including Rs 1 crore should be submitted to the Minister of State in the Ministry of Shipping and Transport for final orders. Cases of estimates and tenders involving expenditure beyond Rs 1 crore should be submitted to Minister for final approval through Minister of State.

121.4.12

No. RW/NHIII/P/16/78

Dated the 14th July, 1981.

To

1. DS (P&B)/DS (R)/All Under Secretaries/D.O.II/D.O. III All Works Sections.
2. All Technical Officers of the rank of Superintending Engineers and above.

Subject : Expenditure Finance Committee/Public Investment Board procedure regarding

A copy of D.O. letter No. DW/DTO-88/79-PDT dated the 27th June, 1981 from Shri H.R. Laxminarayan, Development Adviser, Department of Transport (Development Wing) to all Chairmen of

Port Trusts and the Chairmen of Hindustan Shipyard Limited and Cochin Shipyard Limited with a copy to DG(RD) & Addl. Secretary is circulated herewith for information and guidance.

Enclosure to circular No. NHIII/P/16/78 dt. 14.7.81

Copy of letter No. DW/DTO-88/79 dated 27.6.81 from Development Adviser Ministry of Shipping and Transport (Development Wing) to DG(RD) & Addl. Secretary.

Whenever the feasibility report/detailed project report is prepared, measures for safeguarding the environment have to be proposed as an integral part of the project with specific consideration for anti-pollution measures. The points to be covered should include *inter alia* the impact of the project on the environment, measures proposed to safeguard the environment, anti-pollution measures, cost estimates for such measures and status of consultation with the appropriate authorities responsible for giving clearances for environmental plants. The above information should also find a place in the final Memoranda to Public Investment Board.

I shall be grateful if the above guidelines are strictly complied with.

121.4.13

No. NHIII/P/16/78

Dated the 1st September, 1981

Subject : Expenditure Finance Committee — Procedure reg.

A copy of minutes of the Expenditure Finance Committee meeting held on 26.6.1981 is circulated herewith to all Officers and sections in the Roads Wing. Attention in particular is invited to para 6 of the minutes wherein it has been decided as a matter of policy that no project may be processed for obtaining the approval of the Expenditure Finance Committee unless the detailed estimates are available.

Enclosure to circular No. NHIII/P/16/78 dated 1.9.81

Minutes of the Expenditure Finance Committee meeting held on 26-6-81 under the Chairmanship of Secretary (Expenditure), to consider the proposal for construction of a High Level bridge and its approaches across Tapi river near Dabnashi in mile No. 237/4 (km. 220) of Bombay-Agra road, N.H. 3, Maharashtra at an estimated cost of Rs. 280.00 lakhs.

PRESENT :

V.B. Eswaran, Secy. (Exp) — Chairman
 Brig Gobinder Singh, DG(RD) & Addl. Secy. Ministry of S & T.
 K.S. Vishnu, E.C. — Ministry of Shipping and Transport.
 K.C. Bhatti, Director (Finance) — Ministry of S & T.
 K.M. Pala Subramanian, Dy. Adviser, Planning Commission.
 Prithvi Singh, Dy. Secy. (Plan Finance), Ministry of Finance
 B.B. Srivastava, Dy. Finance Officer, Ministry of S & T.

Initiating the discussion, the Chairman requested the DG (RD) to indicate the urgency of the project its inter-se-priority in the programme of revised priorities of projects to be taken up during the Sixth Plan period. The DG(RD) referred to the priority this project figures in the list as a priority work. He further explained that the existing bridge is a low level bridge and gets submerged during high floods. The existing bridge is not strong enough to carry the present day national highway standard loadings. The bridge falls on one of the most important National Highways, which is known as Bombay-Agra road carrying heavy load of traffic. Referring to the economics of the project, the DG(RD) stated that the new bridge will reduce the length of travel by 6.235 kms and the cost of the bridge will be recovered over a period of years through the toll levy.

- On the question of "top priority" to be given to the works in the North-Eastern region, the DG(RD) explained that works relating to six State roads declared as National Highways in the North-Eastern region will be executed without fail. In no case, these works will be affected by the shortage of funds or will suffer because of other works being taken up or to be taken up by the Roads Wing. The Chairman referred to the case made out by the Roads Wing about the non-availability of additional funds for National Highways in North-Eastern region and the discussions on the subject with the Cabinet Secretary. DG (RD) stated that he was aware of the fact that no extra funds will be available and reassured the Chairman that the execution of the works in the North-Eastern region will be completed as per programme. The DG (RD) stated that in the list of works to be taken up during the Sixth Plan period, the allocation of funds for North-Eastern region has been shown separately and these works

are being taken on top priority basis. The Director (Finance) then showed the relevant para of the letter appended to the list of works sent to the Planning Commission, to the Chairman stating that the Integrated Finance has taken care to ensure that the works of the North-Eastern region are adequately taken care of in the road/bridge programme of the Roads Wing, within the earmarked Plan resources for National Highway system.

3. The chairman then referred to the basis of the project estimation. The rough cost initially projected as Rs. 280.00 lakhs has already changed to Rs 292.00 lakhs. The detailed estimates can be firmed up only after survey for approaches and design for the bridge has been completed. The estimates, now presented for sanction may, therefore, substantially change, as has happened in most of the estimate sanctioned in the past. DG (RD) stated that detailed soil and sub-surface investigations have been carried out for the approved site. It transpires that suitable foundation strata would be available at sufficiently shallow depth for facilitating easy construction of the walls under the piers and the abutments. He added that the cost of the bridge proper has been worked out on the basis of the rate per metre obtained for similar major bridges sanctioned in the recent past and the cost of approaches has been worked out on the basis of latest Schedule of Rates (i.e. 1979-80). The cost estimate is, therefore, related to experience of the cost pattern in such cases. Explaining with reference to the map, the DG (RD) showed the charts and said that hard rock is available at the site of the proposed bridge as per soil samples tested by the Research Institute.
 4. The Chairman pointed out that the work cannot start even after an investment decision is taken in the absence of a detailed estimate till the detailed estimate is available. He felt that the work can be sanctioned after a detailed estimate has been worked out to obviate the necessity for further revisions. DG (RD) felt that once an investment decision is taken, preliminary investigations and survey can be undertaken and expenditure incurred thereon from the provision earmarked therefor. The Chairman stated that the States usually had adequate investigation Divisions and suggested that survey and investigation can be undertaken by them. DG (RD) stated that while they do undertake such works some expenditure is still required to be incurred on survey and investigation.
 5. The Chairman then enquired about the comments, if any, of the Plan Finance Division on the proposal. Dy. Secy. (PF) stated that they have not sent any comments, but will like to be sure of the inter-priority of the project and also that the cost reflected now is firm since there has been repeated cases of cost over-run. Dy. Adviser, Planning Commission referred to the FA's comments which show that Maharashtra State has 82 on going works relating to 4th, 5th and after 5th Plan periods. He was of the view that these works should first be completed, rather than new works are taken up. DG (RD) explained that out of 15 works, 13 works will be completed by March, 82 and in the remaining two works, one case involves land acquisition which will take time. Regarding 3 works of the 5th Plan, two will be completed by March, 1982. The other 64 works were sanctioned during 1978-80 and these are in progress. Dy. Adviser, Planning Commission then took up the other point from FA's note as regards the transfer of the existing bridge to State Govt. DG (RD) explained that the policy of the Ministry is that whatever asset is abandoned, it is given to the State and no compensation is recovered from them. He pointed out that the cost of dismantling of steel from the bridge is more than what is expected to be recovered as sales proceeds. Dy. Adviser, Planning Commission remarked that it has been generally noticed that every 10% increase in the cost of a project leads to 1% decrease in its benefits. Accordingly, it may be assured that there is no cost over-run the execution of projects.
 6. After some further discussion, the committee agreed in principle to the construction of a high level bridge and its approaches across Tapi river at the proposed site for an estimated cost of Rs 292.00 lakhs, but decided that no sanction should be issued at this stage. However, preliminary survey/ investigations can be undertaken for this project at an amount not exceeding Rs 3.00 lakhs. When the detailed estimate is ready, the Ministry may come up for the sanction of the project on file. This may be noted by all concerned as a policy decision for all future cases.
-

F.No. 1(8)/PF-II/81

Dated the 3rd November, 1981

**GOVERNMENT OF INDIA
MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE DIVISION)**

To

All Ministries/Departments of the Govt. of India

OFFICE MEMORANDUM

Subject : Expenditure Finance Committee — Revision of limits

The undersigned is directed to refer to this Ministry's Office Memoranda No. F-10 (26)/E (Coord)/75 dated 4.5.1976 and No. F. 3 (1) E (Coord)/76, dt. 15.9.76 and 20.11.1976 on the subject noted above and to state that in the context of over all increase in prices and need for greater delegation of powers, the existing monetary limits beyond which reference to E.F.C. is necessary have been reviewed. It has been decided to enhance the delegated powers of the Ministries/Departments. The limits beyond which reference to E.F.C. would be necessary, are as follows :-

<i>Items</i>	<i>Existing limits</i>	<i>Revised limit</i>
For non-recurring expenditure	Rs 1 crore	Rs 2 crore
For recurring expenditure	Rs 20 lakhs per annum	Rs 40 lakhs per annum
For Staff cost	Rs 10 lakhs per annum for Plan Schemes and Rs 5 lakhs per annum in other cases.	Rs. 15 lakhs per annum for Plan Schemes and Rs 7.50 lakhs in other cases
Revision of cost estimates.	15% of the original approved cost	20% of the original approved cost
Margins for revision of firmed up cost estimates.	NIL	10% or Rs 40 lakhs whichever is less, for these cases where revised cost or firmed up cost is approved by the E.F.C.

- The cases which involved investment exceeding Rs 10 crores or where the revised/firmed up cost exceeds Rs 10 crores, would require approval of the PIB and the Cabinet.
- Ministry of Home Affairs etc. are requested to note the above decisions for processing of cases for submission to the E.F.C.

121.4.15

No. NHIII/P/16/78

Dated the 31 March, 1982.

To

- All Chief Engineers/Superintending Engineers in the Roads Wing.
- All Sectt. Branch Officers,
DS (P&B), US (NHA), US (NHB) & US (RM)

Subject : Clearance/approval of Public Investment Board-Procedures regarding

The Cabinet Secretary has directed that while processing cases for approval of the Public Investment Board/Committee on Economic Affairs, the data as in the proforma enclosed should be given in a summarised form and attached as "Front sheet" to the note for the Cabinet Committee. The requirement is accordingly brought to the notice of all concerned with the request that the above instructions may please be carefully noted and complied with in future.

P.I.B. Cases

1. Name of the undertaking.
2. Purpose of submission of the case to Cabinet Committee — like 'Approval for setting up a project etc.' or 'Approval for the revised cost estimate of the project'.
 - (A) *First approval case (based on feasibility report)*
 - Date of consideration of the case by PIB
 - Proposed date of completion of the project.
 - Date of submission of the case to the Cabinet Committee.
 - (B) *Cost approval on firmed upon cost estimates based on detailed project report.*
 - Date of approval by the Cabinet Committee/PIB for original cost estimates.
 - Date of approval of detailed firmed up cost estimates within delegated power.
 - Date of submission of firmed up cost estimates to PIB when firmed up cost exceeds delegated power.
 - Date of consideration of firmed up cost estimates by PIB.
 - Date of submission of the case to the Cabinet Committee.
 - Estimated date of completion of the project (delay, in months).
 - (C) *Revised Estimates*
 - Date of preparation of revised estimates.
 - Date of approval of revised estimates within enhanced delegation of 'margins'.
 - Date of submission of revised cost to PIB when cost is in excess of enhanced powers.
 - Date of consideration of revised cost by PIB.
 - Revised project schedule.
3. For subsequent revisions information as at 'C' may be given.

121.4.16

NO. NHIII/P/16/78

Dated the 21st May, 1982

To

P.S. To DG (RD) & Addl. Secretary/PS to ADG (B)/Director (R)/ DS (P& B)/All Under Secretaries/D.O. II/D.O. III/All Works Sections in the Roads Wing.

All Technical Officers of the rank of Superintending Engineer and above.

Subject : Clearance/Approval of Public Investment

In accordance with the Ministry of Finance (Plan Finance Division) O.M.No. F. 1 (18) P.F. II/78 dated 1.9.81 circulated along with circular No. RW-A-12 (1) 81 dated the 28th September, 1981 all projects involving expenditure of Rs 10 crores and above are required to be submitted to Public Investment Board for approval.

The Ministry of Finance (Plan Finance/Division) have now clarified vide their U.O.No. 7171/P.F.II/81 dated 10.12.81 (copy enclosed for ready reference) that the road and bridge projects need not be submitted to Public Investment Board irrespective of the cost. These cases will be considered by the Expenditure Finance Committee. However, it would be necessary to obtain the approval of the Cabinet where the Capital Outlay involved is more than Rs 10 crores.

MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE DIVISION)

U.O. No. 71/71/TF II/81

Dated the 10th Dec. 1981

Subject : PIB Reference — Criteria for decision

Ministry of Shipping and Transport (Finance Wing) may please refer to their U.O.No. 4032-TF. II/81, dated the 4.12.1981 on the subject mentioned above.

2. The criteria for deciding whether a particular scheme costing even more than Rs. 5 crores requires a reference to P.I.B. or not, is whether the investment lends itself to demand, choice of technology, location, economic and financial return etc. Construction of the bridge is not likely to have any financial return normally. Economic return will, however, be there. Taking the various aspects into consideration, we feel that the case need not be considered by the P.I.B. It may be considered by E.F.C.

121.4/16

3. Since the Capital Outlay involved will exceed Rs. 10 crores, Cabinet's approval would also be necessary.

To

Ministry of Shipping and Transport (Finance Wing) Shri B.B. Srivastava, DFO

121.4.17

No. FW/10(77)/TFI/82

Dated the 4th Oct, 1982

OFFICE MEMORANDUM

Subject : Issue of sanction for proposals cleared by the EFC.

In supersession of Finance Wing's O.M. of even number dated 25th September, 82 on the above mentioned subject, a clear and corrected copy of the enclosure thereto is forwarded herewith for information and compliance.

To DG (RD) & AS/AS(P)/JS(S)/JS(T)

GOVERNMENT OF INDIA
MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE DIVISION)

No. 1 (1)/PF-II/82

Dated the 15th Sept, 1982

OFFICE MEMORANDUM

Subject : Issue of sanctions for proposals cleared by the Expenditure Finance Committee

A case where financial sanction was issued 5 months after clearance of the proposal by the E.F.C. has recently come to the notice of the Chairman, EFC. Cases cleared by the E.F.C., are required to be approved by the Minister of Administrative Ministry and the Finance Minister. For speedy implementation of the projects/schemes, Chairman, E.F.C. has desired that a time schedule for issue of financial sanction after following the prescribed procedure should be stipulated. It has, accordingly been decided that administrative Ministry concerned should issue the sanction for a project/scheme within a period of one month from the date of its clearance by the EFC after obtaining necessary approval. In case where sanction is delayed beyond this period, a report may be sent to the Chairman of the EFC indicating the reasons for the delay.

2. Ministry of Agriculture etc. are requested to note the above decision for expeditious issue of sanctions.

To

All Ministries/Departments of the Govt. of India

121.4.18

No. NHIII/P/16/78

Dated the 21st September, 1984

Subject : Public Investment Board Procedure & Additional Guidelines

A copy each of the Ministry of Finance, Department of Expenditure O.M. both No. 1 (4)/PF. II/84 dated 23rd & 25th August, 1984 on the above subject together with enclosures, is forwarded herewith for information/guidance and necessary action direct.

To

- (i) PS to DG (RD)/Senior P.A. to ADG (R)/Senior P.A. to ADG (B)
- (ii) All Chief Engineers in the Roads Wing.
- (iii) DS(R)/DS(P&B)/All Superintending Engineers in the Roads Wing/All Under Secretaries in the Roads Wing.
- (iv) All Desk Officers/Section Officers in the Roads Wing.

No. CDN/CMF-35/84

Dated the 31st August, 1984

Subject : Public Investment Board Procedure & Additional Guidelines

A copy each of the Ministry of Finance, Department of Expenditure O.M. both No. 1 (4)/PF II/84

dated 23rd & 25th August, 1984 on the above subject together with enclosures, is forwarded herewith for information/guidance and necessary action direct

To

DG(RD)/JS(T)/JS(P)/DA/CE(IWT)/DIR(S)/DIR(MM)/DS(SY)

Copy also to : The heads of all Public Undertakings.

GOVERNMENT OF INDIA
MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE II DIVISION)

No. 1 (4)/PF. II/84

Dated the 23rd August, 1984

OFFICE MEMORANDUM

Subject : Public Investment Board Procedures

A review of the revised cost estimates brought before the PIB for their consideration in the recent years reveals large cost and time over-runs. Apart from escalations arising from the present system of project approval on the basis of fixed cost and also from time over-runs, factors like substantial changes in the scope of the projects, gross under provisioning for some items, omission to provide for all the essential items etc. are also seen to contribute to the major proportion of the increase in cost.

2. The sanction of a large number of projects at grossly under-estimated project costs leads to an anomolous situation particularly at a time of resources constraint. Not only is there a pre-emption of resources for the ongoing projects, leaving little for new projects, but often it also becomes difficult to fund fully the various ongoing projects themselves. The time over-runs also result in a large volume of investment lying idle thereby reducing the tempo of growth of the economy. It is against this background that the Economic Advisory Council have in their Second Report stressed the need for introducing increased discipline in project formulation and appraisal so as to avoid subsequent cost escalation without demonstrable reasons and for introducing greater selectivity in the choice of new projects, so that low priority projects are not cleared. The rising input-output ratios of the public sector projects and the considerable resources constraint that the economy is expected to face in the Seventh Plan also underline the need for such measures. On the balance of payment side the Seventh Plan has to take into account the prospect of considerably diminished flow of concessional financial assistance from abroad, sizeable debt service obligation and an environment where interest rates are expected to remain high, with only limited possibilities of any acceleration in the volume of export growth. Thus, in respect of projects involving large external finances and/or import of machinery and raw material, as also those aiming at import substitutions, a greater element of selectivity, with emphasis on cost effectiveness becomes necessary.
3. It has, therefore, been decided that only those projects with a financial rate of return and an economic internal rate of return both exceeding 12% should be posed to the PIB for their consideration in future. The economic internal rate of return shall be computed as per the existing guidelines, i.e. excluding taxes and duties, adopting a premium of 25% on foreign exchange and shadow pricing for energy costs, transport charges, etc., where necessary.
4. In those cases where either the financial rate of return of the economic internal rate of return is over 12%, but the other one falls short of the norm, and the administrative Ministry still considers it essential that the project should be taken up for implementation, the reasons therefore should be gone into in detail at the pre-PIB meetings and also set out in the memorandum for the PIB. The PIB shall consider such cases, only in exceptional circumstances and that too only if the projects are in the core sector.
5. Under no circumstances shall projects with both the financial and economic internal rates of return falling below 12% be considered by the PIB.
6. It has been noticed that a number of proposals being put up to PIB have very high costs in terms of rupees in relation to the amount of foreign exchange saved. In a situation where rupee resources are also scarce, it is important to ensure that the rupee cost of saving foreign exchange is not unduly high. In order to focus attention on this problem, in future all proposals for consideration of the PIB should contain a calculation of the "Domestic Resource Cost" of saving foreign exchange. Rupee cost

of saving foreign exchange is the ratio of the discounted stream of *net* domestic costs over the life of the project to the discounted stream of *net* foreign exchange benefits. All potentially importable exportable items are counted as part of the net foreign exchange stream and no shadow exchange rate is used in the calculation. This calculation will also be discussed in the PIB meeting. (A rough and ready calculation of the cost of foreign exchange saving can be made by taking the cost and output data for the year in which the project is expected to reach full production. Thus, if the c.l.f. value of output is Rs. 100/- and imported raw materials (c.l.f.) plus depreciation on imported machinery amount to Rs. 50/- the net foreign exchange saving is Rs. 50/- or \$ 5 (assuming \$ 1 = Rs. 10). If the cost of domestically procured raw materials (net of excise), labour and other variable costs plus interest charges and depreciation on indigenous machinery in that year is Rs. 100/- then the rupee cost of saving a dollar of foreign exchange is Rs. 20 to \$ 1 which will be twice the prevailing exchange rate of the rupee with dollar).

7. A number of projects which at the time of approval were found justified on the basis of time and cost schedules as set out in the feasibility reports presented to the PIB were subsequently seen to have come totally unviable because of inordinate delays in implementation and cost over-runs. In order to bring out the impact of such over-runs on the viability of a proposed project, the Project Appraisal Division of the Planning Commission shall in its appraisal carry out a sensitivity analysis on the internal rates of return for different levels of time and cost over-runs. In respect of undertakings, which have implemented and/or implementing projects, one of the points in the sensitivity analysis shall be the "average" delay noticed in the implementation of projects by the undertaking.
8. All Ministries/Departments are requested to ensure that these guidelines are strictly observed. They are also requested to bring these guidelines to the notice of the public sector undertakings under their control for complinace.
9. These instructions have the approval of the Finance Minister.

To

All Ministries/Departments of the Government of India

All Secretaries (by name) of the Government of India

Special Secretary, Prime Minister's Office

Special Secretary & C.E.A., Department of Economic Affairs

Special Secretary & D.G., Bureau of Public Enterprises

Additional Secretary (EF), Department of Economic Affairs

Adviser (PAD), Planning Commission

All Financial Advisers (by name)

GOVERNMENT OF INDIA
MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE II DIVISION)

No. 1 (4)/PF.II/84

Dated the 25th August, 1984

OFFICE MEMORANDUM

Subject : Public Investment Board Procedures-Additional guidelines

With a view to introducing a greater degree of selectivity in the projects to be posed to the Public Investment Board for their consideration, certain criteria have been stipulated in this Ministry's Office Memorandum No. 1 (4)/PF.II/84 dated 23rd August, 1984. As part of these measures it also becomes necessary to amplify/modify some of the guidelines already in force. These additional guidelines are set out in the annexure.

2. All Ministries/Departments are requested to ensure that these guidelines are strictly observed. They are also requested to bring these guidelines to the notice of the Public Sector Undertakings under their control for compliance.
3. These instructions have the approval of the Finance Minister.

To

All Ministries/Departments of the Government of India

All Secretaries (by name) of the Government of India

Special Secretary, Prime Minister's Office

Special Secretary & C.E.A., Department of Economic Affairs

Special Secretary & D.G., Bureau of Public Enterprises

Additional Secretary (EF), Department of Economic Affairs

Adviser (PAD), Planning Commission

All Financial Advisers (by name)

ANNEXURE

PUBLIC INVESTMENT BOARD PROCEDURES ADDITIONAL GUIDELINES

All proposals, whether a new project proposal or a revised cost estimate, to be brought before the Public Investment Board for its consideration, shall first be examined at a Pre-PIB meeting to be taken by the Financial Adviser of the concerned Ministry with representative of the appraising agencies-Project Appraisal Division (Planning Commission) Bureau of Public Enterprises, Department of Economic Affairs and Plan Finance. Representatives of the concerned division of the Planning Commission dealing with the subject as also of all Ministries/Departments of the Government of India, like Railways, Department of Electronics, Department of Environment, etc., who are concerned with the project, shall also be invited for the meeting. Where, for successful implementation of the project, complementary investments are to be made by other agencies, as for instance, on provision of water supply, laying of roads, setting up of railway facilities etc., then representatives of these agencies shall also be invited for the meeting. Where import of technology/equipment/raw material or external funding is visualised, it is to be ensured that a representative of the Department of Economic Affairs attends the meeting. The minutes of the Pre-PIB shall be appended to the memorandum to the PIB and the main points raised at the Pre-PIB meeting should be specifically referred to and dealt with in the body of the PIB memorandum. The papers for the Pre-PIB meetings shall be circulated to all the invitees at least six weeks before the date of the meeting so as to give sufficient time to these agencies to examine the proposal in depth and offer their comments, if possible in writing, before the meeting itself.

2. In order to enable the PIB to have a complete picture of the proposal, the memorandum to the PIB should be in detail, setting out in financial and physical terms all aspects of the project, and should, *inter alia*, contain information on all items listed in this Ministry's O.M. No. 1 (6)/PF. II/82 dated 2.11.1982. The PIB Secretariat has been authorised to return the PIB memoranda which do not contain all the relevant information and are considered incomplete.
3. While forwarding 40 copies of the PIB memoranda to the PIB Secretariat, the Administrative Ministry shall also simultaneously send copies, directly to each of the appraising agencies so as to enable them to examine and offer their comments on the proposal. In the normal course, the proposals would be brought before the PIB for its consideration in about four to six weeks from the date of receipt of the memoranda so as to allow sufficient time to the appraising agencies to forward their comments.
4. The memorandum to the PIB shall clearly set out the project cost as well as the phasing as arrived at on the basis of the feasibility report/revised cost estimates report. The memorandum shall also indicate the approved annual/Five Year Plan outlays and, where there is a gap between the requirement and availability of funds, there should be a clear indication of how it is proposed to bridge the gap. In the case of new project proposals, if there is a gap between the requirement of funds and the available Plan provisions, the Administrative Ministry concerned should take up the matter with the Planning Commission and the Finance Ministry and only after this issue is satisfactorily settled, should the proposal be brought to the PIB for an investment decision. The memorandum to the PIB shall also set out the details of the expenditure, if any, that will have to be incurred by other agencies, to ensure successful functioning of the project. In such cases, the information obtained from these other agencies regarding the availability of funds for meeting the same, should also be set out in the PIB memorandum. This aspect should, in particular, be gone into in detail in the Pre-PIB meeting.
5. It has been observed that in a large number of cases, a major portion of the time over-run and cost over-run is attributable to major scope changes in the project after it had been approved for implementation. Large omissions as well as under-provisioning for even essential items have also been noticed in many cases. It is necessary to ensure that investment decisions are taken only on the basis of well prepared feasibility reports. In the memorandum for the Pre-PIB meeting the Administrative Ministry shall, therefore, set out in detail the various pre-investment activities that have been undertaken, and in the Pre-PIB meeting one of the main items to be covered would be the adequacy of the pre-investment activities for determining the broad parameters of the project and the cost estimates with a reasonable degree of accuracy. In the memorandum to the PIB, the comments of the appraisal agencies, as indicated in the Pre-PIB meeting, on the adequacy of the pre-investment activities undertaken, should be specifically highlighted. Where the discussions at the Pre-PIB, and in the PIB meetings reveal misgivings about the adequacy of the pre-investment activities and the reasonableness of the cost estimates and project parameters, the PIB would return the proposal for the preparation of a fresh feasibility report based on more intensive studies.
6. Where the initial investment clearance is given on the basis of feasibility report and not a detailed project report, the existing instructions stipulate that the Administrative Ministry should bring to the PIB the firmed up cost estimates along with the detailed project report within a period of one year. In many cases, the firmed up cost estimates are not being brought to the PIB within the stipulated period of one year, while in a few cases, the detailed project report is not being presented to the PIB at any stage. It is also noticed that where major changes are made in the scope of the project after its approval, these changes are not brought to the notice of the PIB till a very late stage, leaving the PIB with no option but to approve the revised project profile as proposed. It is necessary that in the event of major changes having to be made in the scope of the project, the proposal is brought before the PIB for its consideration at the earliest. With this end in view it is hereby reiterated that where the initial approval is based only on a feasibility report, the Administrative Ministry concerned shall bring to the PIB the firmed up cost estimates along with the detailed project report within one year of the date of approval of the project. In those cases where it is expected that the preparation of the detailed project report would take some more time, the reasons for this should be brought

to the notice of the PIB within the stipulated one year period, along with the latest cost estimates, and details of scope changes, if any, considered necessary up to that stage, and the PIB shall set a fresh date by which the firmed up cost estimates and the detailed project report are to be brought before it for its consideration. In all these cases, where large scope changes are considered necessary, the Administrative Ministry shall, to the extent possible, keep the commitments to the minimum till these have been brought to the PIB and its clearance obtained. It shall be the responsibility of the Financial Adviser of the Administrative Ministry and the Finance representative on the Board of the public sector undertaking concerned to ensure that this requirement is fulfilled and towards securing this objective they shall stop further release of funds if the firmed up cost estimates/detailed project report are not brought before the PIB by the stipulated time.

7. A number of instances of large cost over-runs have come to notice where funds in excess of the approved cost estimates have been released, before the clearance of the PIB for the revised cost estimates was sought. It shall be the responsibility of the Financial Adviser of the Administrative Ministry and the Finance representative on the Board of the public sector undertaking concerned to ensure that the revised cost estimates are brought to the PIB for consideration before the actual expenditure exceeds the approved cost estimates and towards this end they shall ensure that funds are not released in excess of the approved cost estimates before the revised cost estimates are cleared by the PIB.
8. Weaknesses in organisational structure and deficiencies in management are also seen to contribute to cost and time over-runs. The memorandum to the PIB should, therefore, contain a section on the past/current record of performance of the undertaking in implementation of projects. The details of the cost and time over-runs together with the deficiencies, if any, noticed in the organisation and the steps proposed to be taken to set things right should also be spelt out. The organisational arrangements proposed to be put on ground for implementing the proposed project, together with the details of the senior management staff already identified for implementing the project should also be indicated. This section should also contain information in respect of basic parameters like production turn over, profitability etc. of the undertaking for the preceding five years and the projections for succeeding five years.
9. In respect of all projects approved for implementation on the basis of the PIB's clearance, the Administrative Ministry shall send to the Bureau of Public Enterprises and to the PIB Secretariat a report every quarter reviewing in detail the progress made in the implementation of the project till it is completed. The forwarding of the progress report in respect of any project shall be stopped only after the completion report has been sent.

**GOVERNMENT OF INDIA
MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE DIVISION)**

No. 1 (6)/PF-II/82

Dated the 2nd November, 1982

OFFICE MEMORANDUM

Subject : Form of P.I.B. Memorandum

Unlike the EFC Memorandum, the PIB procedure does not provide for preparation of the PIB Memorandum in a particular format. The matter has been considered in the light of information contained in PIB Memorandum prepared for different projects by various Ministries. While it is realised that it is not possible to prescribe a proforma for universal application, it is necessary to ensure that the system provided for flow of certain essential information relating to each project to the PIB through the Memorandum. The type of information considered essential for this purpose has been identified and included in the Annexure. While it is open to every Ministry to prepare the PIB Memorandum in such a form as to contain all relevant information relating to each project according to its peculiarity for taking the investment decision, it is requested that the PIB Memorandum is so drafted as to ensure that the minimum information indicated in the Annexure is contained therein. It is not essential that the text of the PIB Memorandum must contain all the information. Some of these could be set out in Annexures to the Memorandum.

2. It need not be emphasised that all other information vital for consideration of the investment proposal should also be set out in the PIB Memorandum.
3. Ministry of Agriculture etc. are requested to implement these instructions with immediate effect.
4. Financial Advisers are requested to ensure compliance with these instructions before clearing a PIB Memorandum for consideration by the PIB.

SECTION-I

1. Name of the Project
2. Whether it is a case for fresh approval or firmed up or revised cost estimates
(Additional information for firmed up cost estimates/revised cost estimates as in Section-II will have to be furnished)
3. Name of the implementing agency
4. Administrative Ministry

5. **Location (State/District/Town)**
6. **Agency which prepared the feasibility Report/Detailed Project Report/Detailed Cost Estimates.**
7. **Date of Preparation of FR/DPR/DCE**
8. **Demand-supply-gap and the contribution of the project to bridge the gap. Projection for export, if any, may also be indicated.**
9. **Principal raw material/components and source thereof indicating annual imports in quantity and value.**
10. **Where import of technology is involved, brief justification for the same.**
11. **Major facilities with capacity of each facility (i.e. Ammonia Plant, Urea Plant, Utilities etc. in a Fertiliser Project or Gascracker, PVC, LDP etc. down-steam plants in a petro-chemical Project).**
12. **Product-mix and capacity for the end product.**
13. **Capitall cost with break up under broad headings (like plant & equipment utilities etc.).
In the case of firmed up cost estimates/revised cost estimates, information about last approved cost may also be supplied.**
14. **Foreign Exchange component**
15. **Specific investment per unit (e.g. per tonne of coal, per tonne of fertilizer, per tonne of steel, per MW of power).**
16. **Base price for cost estimates.**
17. **Basis of cost estimates.**
18. **Degree of reliability of cost estimates (excluding future escalations).**
19. **Whether clearance from environmental angle has been obtained and whether adequate provisions of combat environmental hazards has been made.**
20. **If it is an expansion proposal, comparison of cost with a grass root facility.**
21. **System cost not included in the estimates.
(e.g. investment on the linked coal mine in the case of a power project or investment on Railways/Port facilities etc.)**
22. **Completion schedule
(Include all activities)**
23. **Production build-up**
24. **Phasing of investment.**
25. **Likely expenditure during plan period and the approved plan provision.**
26. **Justification for taking up the project, if not included in the approved Five-Year Plan.**
27. **Sources of financing, indicating the extent of budgetary support required during the plan period.**
28. **Cost of production per unit.**
29. **Selling price per unit.**
30. **Value of annual output.**
31. **Financial IRR, indicating assumption about extent of capacity utilisation.**
32. **Economic IRR without premium on foreign exchange.**
33. **Annual foreign exchange savings (excluding value of imported raw materials components, royalty, etc.)**
34. **Direct employment generation.**
35. **Annual subsidy, if any, for sale at administered prices.**
36. **Assumptions made in the proposal which are uncertain (apart from current cost and prices).**
37. **Alternatives considered in making the proposal.**
38. **Project management set up, existing or proposed.**
39. **Information about the number of projects which will implemented concurrently by the same implementing agency, and if the organisation is geared to tackle all of them.**
40. **Reservations/comments of appraising agencies.**

SECTION-II

(Additional information in the case of firmed up or revised cost estimates)

41. **Date of approval of original cost of firmed up cost.**
42. **Original or firmed up approved cost together with FE component.**

43. Present cost together with E.E. component.
44. Major variation in the capacity or the project concept if any from the earlier approved proposal.
45. Change in pattern of funding, if any.
46. Earlier project completion schedule.
47. Revised project completion schedule.
48. Brief reasons for time over-run in clear terms.
49. Various analysis of cost increase under :—
 - (a) Escalation
 - (b) Change in scope/addition
 - (c) Change in statutory levies
 - (d) Omissions.
 - (e) Under estimation.
 - (f) Others.
50. Quantification of increase in cost on account of time over-run.
51. Present status of physical progress of the project.
52. Expenditure incurred and commitments made so far.
53. Effect of revision in capital cost estimates on cost of production and profitability with reference to earlier approved capital cost of the project.

121.4.19

No. NHIII/P/16/78

Dated the 12th April, 1985

Subject : Expenditure Finance Committee/Public Investment Board procedure regarding

A copy of the Office Memorandum No. F. 1 (8) PFII/82 dated the 29th March, 1985 from the Ministry of Finance, Department of Expenditure, (Plan Finance II Division) on the subject mentioned above is circulated herewith for information and guidance.

To

All Officers and Sections in the Roads Wing.

GOVERNMENT OF INDIA
MINISTRY OF FINANCE
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE II DIVISION)

No. F. 1 (8) PFII/82

Dated the 29th March, 1985

OFFICE MEMORANDUM

Subject : Public Investment Board procedures—Introduction of two stage clearance for projects

With a view to introducing a greater degree of selectivity in the projects to be taken up for implementation, certain criteria for project selection have been stipulated in this Ministry's O.M.No. 1 (4) PFII/84 dated 23rd August, 1984. Some modifications to existing guidelines as well as some additional guidelines to the PIB procedures were also prescribed in this Ministry's O.M.No. 1 (4) PFII/84 dated 25th August, 1984 so as to ensure greater discipline in project formulation and appraisal. These measures became necessary as considerable cost and time over-runs were noticed in a number of projects under implementation. While time over-runs lead to idling of a large volume of investment thereby reducing the tempo of economic growth, the cost over-runs lead to pre-emption of resources for on-going projects leaving little for new projects.

2. An analysis of the reasons for the cost over-runs reveals that apart from escalations arising from the present system of approving projects on the basis of fixed costs, factors like substantial changes in the scope of the projects, gross under-provisioning for some items etc. are also seen to contribute in a large measure to increases in costs. This clearly underlines the need for better preparation of project reports with a greater degree of reliability in regard to the cost estimates and time schedules and also

the need for adequate funding for pre-investment activities necessary for the preparation of good feasibility reports. It has, therefore, been decided that project approvals should in future be given in two stages-proposals for preparation of feasibility reports being cleared in the first stage and investment decisions being taken at the second stage on the basis of well prepared feasibility reports.

3. Proposals for preparation of feasibility reports will be considered by a Committee of the Public Investment Board consisting of the Secretary (Expenditure) as the Chairman and the Secretary (Planning Commission) and the Secretary of the administrative Ministry concerned as Members. The Committee would examine the broad features of the proposals with a view to deciding on the desirability of preparation of detailed feasibility reports. The Committee, while clearing such proposals, would also authorise the incurring of necessary expenditure for activities like site investigations, tying up of know-how and technology, identifying the lists and sources of equipment and calling for budgetary quotations, certain amount of detailed engineering, engaging of consultants for preparation of the feasibility report etc. Where major policy decisions are seen to be involved or where the Committee anticipates that the implementation of the project would call for very large investments or where there are major linkages with the other sectors, the Committee may recommend consideration of the proposal by the Public Investment Board or seeking the approval of the Cabinet Committee on Economic Affairs.
4. In order to reduce the time taken for clearing such proposals it has been decided to dispense with consideration of such proposals at earlier stages at inter-ministerial meetings, like the pre PIB meeting. The Ministries will, while sending the proposals to Plan Finance II Division, which will provide the secretarial assistance to the Committee, simultaneously endorse copies to the various appraisal agencies as well as departments like Environment, Electronics and Economic Affairs whenever they are concerned so that the comments of these agencies and the Departments become available to the Committee in time before it meets to consider the proposal.
5. In order to ensure that only the more important proposals are brought to the Committee for its consideration it has also been decided to increase the present delegation of financial powers to administrative Ministries for sanctioning of preparation of feasibility reports. The administrative Ministries can now themselves sanction preparation of feasibility reports costing upto Rs. 20 lakhs each wherever the project cost is not expected to exceed Rs. 20 crores, subject to availability of necessary budget and plan provisions. All cases where the cost of the feasibility report exceeds Rs. 20 lakhs or where the cost of the project is more than Rs. 20 crores, would be placed before the Committee for its consideration. The present arrangements for authorising preparation of feasibility reports on a continuing basis for coal and power projects within the frame-work of the approved budget and plan provisions would, however, continue unchanged. All Ministries should keep the Committee informed of the feasibility studies authorised by them under the delegated powers, so that the inter-linkages with other sectors could be taken up by the Committee at the appropriate stage.
6. All Ministries/Departments are requested to ensure that these instructions are strictly observed. They are also requested to bring these instructions to the notice of the public sector undertakings under their control for compliance.

To

All Ministries/Departments of the Govt. of India

All Secretaries (by name) of the Govt. of India

Cabinet Secretariat

Addl. Secretary, Prime Minister's Office.

Secretary (Banking) & C.E.A., Deptt. of Economic Affairs

Secretary & D.G., B.P.E.

Additional Secretary (EF), Department of Economic Affairs

Adviser (PAD), Planning Commission

All Financial Advisers (by name)

121.4.20

No. NHIII/P/16/78

Dated the 6th May, 1985

Subject : Clearance of proposals for construction of roads/bridges by the PIB/EFC-instructions regarding

A copy of the Office Memorandum No. 1 (1)/PF. II/85 dated the 17th April, 1985 from the

121.4/24

Ministry of Finance, Department of Expenditure, (Plan Finance Division) on the subject mentioned above is circulated herewith for information and guidance.

To

All Officers and Sections in the Roads Wing.

**GOVERNMENT OF INDIA
DEPARTMENT OF EXPENDITURE
(PLAN FINANCE DIVISION)**

No. 1 (1)/PF.II/85

Dated the 17th April, 1985

Subject : Clearance of proposals for construction of roads/bridges by the PIB/EFC-instructions regarding

At present project proposals for construction of roads/bridges are cleared by the expenditure Finance Committee irrespective of the cost of the project. As per the extant instructions, all proposals costing more than Rs 10 crores are required to be approved by the PIB keeping in view whether such proposals can lend themselves to economic appraisal with reference to demand, choice of technology, location, economic and financial return etc. The Roads/bridges projects are now being appraised in terms of social costs and benefits, economic IRR etc. It has, therefore, been decided that proposals for construction of roads/bridges costing Rs 10 crores and above should be subject to the Public Investment Board procedures.

To

Ministry of Shipping & Transport
(Roads Wing)

Copy to :—

1. JS & FA, M/O Shipping & Transport
2. Adviser (PAD), Plg. Commission.
3. Adviser (Transport), Plg. Commission.
4. Adviser (Finance), BPE.
5. Adviser (Construction), BPE.
6. Adviser (Production), BPE.
7. Director (DEA).
8. Cabinet Sectt.

121.5 REVISED ESTIMATES PERMISSIBLE EXCESS & CHANGE OF SCOPE

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
121.5.1	NHIII-33 (20)/72 dt. 28.7.72	Submission of Revised Estimates in Respect of NH Works-Procedure for	121.5/1
121.5.2	PL-30 (110)/74 dt. 25.9.74	Adjustment of Expenditure on NHs	121.5/1
121.5.3	PL-30 (110)/74 dt. 2.2.76	Permissible Limit in Respect of NHs	121.5/2
121.5.4	NHIII/P/50/76 dt. 1.7.76	Revised Estimates of NH (R&B) Works : Check-Lists	121.5/2
<u>121.5.5</u> (130)	NHIII/P/14/77 dt. 6.7.77	Clauses in Revised Estimates Sanction on Cancellation of Contract	121.5/7
<u>121.5.6</u> (121.2)	NHIII/P/31/77 dt. 28.10.77	Avoidance of Revision	See Code No. 121.2
121.5.7	NHIII/P/25/78 dt. 24.5.78	Submission of Revised Estimates for Works on NHs	121.5/9
<u>121.5.8</u> (121.4)	NHIII/P/16/76 dt. 8.9.78	Submission of Cases to Expenditure Finance Committee Inspections Regarding-Procedure for Processing of Revised Estimates Costing Rs 1 crore and above	See Code No. 121.4
121.5.9	NHIII/P/25/78 dt. 12.11.79	Submission of Revised Estimates for Works on NHs-Periodical Review of Expenditure/Construction Period & Physical Progress of Works	121.5/10
<u>121.5.10</u> (130)	PL-30 (6)/80 dt. 19.1.80	Submission of Revised Estimates for NHs etc.	121.5/11
121.5.11	NHIII/P/10/80 dt. 30.12.80	Preparation of Detailed Project Estimates for NH (R&B) Works-Avoidance Revision	See Code No. 121.4
<u>121.5.12</u> 121.6	D.O. No. B-30 (41)/81 dt. 14.7.81	Prior Approval of Excesses Revised Estimate	121.5/12
121.5.13	RW/NHIII/Coord/38/84 dt. 5.4.84	Recommendations of Vohra Committee-Revised Estimate Submission	121.5/12
<u>121.5.14</u> 121.6	RW/NHIII/Coord/32/84 dt. 19.5.84	Recommendations of Vohra Committee-Prior Approval for Changing Scope of Sanctioned Estimates	121.5/13
121.5.15	NHIII/P/25/78 dt. 5.7.85	Submission of Revised Estimates	121.5/13

No. NHIII-33 (20)/72

Dated the 28th July, 1972

To

Secretaries to all State Govts.
Union Territory Administration, etc.

Subject : Submission of revised estimates in respect of National Highway Works-Procedure for the

I am directed to invite a reference to the correspondence resting with this Ministry's letter No. NHI-40 (10)/70, dated the 20th July, 1971, wherein the Accountants General or Comptrollers concerned were empowered in respect of national highway (original) works to pass excess over the sanctioned estimate for a workup to the limit of either 10% of the amount sanctioned for the work by the Government of India or Rs 2,50,000-, whichever is less.

2. The procedure for the submission of revised estimates in respect of National Highway Works, in case there is an excess over the sanctioned cost beyond the permissible limit of Rs 2.5 lakhs or 10% of the sanctioned cost of the work, whichever is less, has been engaging the attention of the Government of India for sometime. As the State Governments are aware, under the existing procedure, which is based on the provisions of the Central Public Works Department code, when an excess over the sanctioned estimate beyond the permissible limit as referred to above is anticipated or has occurred, a revised estimate has to be prepared and submitted, for sanction, but if the liability or occurrence of such an excess may have been found at a stage when the work has been completed or has reached an advanced stage of construction, the excess is supposed to be explained in a completion report and it would not be necessary in such cases to submit a revised estimate.
3. It has not been found quite suitable to follow the procedure outlined above for national highway works and other centrally financed road works in case where liability or occurrence of excess is observed at a very advanced stage of execution or on completion of the works, as, in view of the special agency arrangements with the State Governments, (a situation vitally different from the State Public Works Department executing their own works) the revised estimate has to be prepared by the State Public Works Department concerned and is to be forwarded to this Ministry through the State Chief Engineers/State Government. If any clarification is required by this Ministry, which is largely the case in respect of revised estimates, the same has to be obtained through the State Chief Engineer/State Government. By the time the clarifications etc. are received and the revised estimate is finalised and the stage for its processing for sanction is reached, the work might get physically completed or reach a very advanced stage of execution, even though the State Public Works Department might have initiated and submitted the revised estimate at a much earlier stage. At that stage, strictly under the present procedure, the revised estimate would no longer be admissible for sanction but only a completion report would be required to be made available. As the full details justifying the excess cost would not be available in the completion report, such full details again approaching the nature of a revised detailed estimate may still be needed.
4. After careful consideration of the circumstances explained above, it has been decided, in modification of the present procedure, that henceforth revised estimates in respect of National Highway works and other centrally financed road works where liability or occurrence of an excess may arise when work has reached an advanced stage of execution or may have actually been completed should be forwarded to this Ministry, if there is an excess over and above the sanctioned cost of the work beyond the permissible limit of Rs 2.5 lakhs or 10% whichever is less. In addition to these, completion reports for such works are also required to be furnished to this Ministry as usual.
5. The contents of this letter may please be brought to the notice of all concerned.
6. The receipt of this letter may please be acknowledged.

No. PL-30 (110)/74

121.5.2

To

Dated the 25th Sept., 1974

The Secretaries to the State Governments/ Union Territory Administrations, (Deptts. dealing with National Highways all except Arunachal Pradesh, Mizoram, Pondichery, Dadar, Nagar Haveli, L & A Island, A & N Is) and.

Subject : Adjustment of expenditure on National Highways.

I am directed to refer to this Ministry's letter No. WI-12 (17)/46 dated the 5th March, 1948 as subsequently amended by letters No. B-30 (4)/49 dated 29th July, 1949 and No. NHI-40 (10)/70 dated

the 20th July, 1971, and to say that the monetary limits upto which the State Governments can incur expenditure in excess of the sanctioned estimates have been recently reviewed by the Government of India in the context of the present day costs and the need for ensuring greater decentralisation of functions and speedier execution of works. It has now been decided that the revised limits upto which the Accountant General or the Comptroller concerned may pass an excess over the sanctioned estimates of a work should be 15% of the amount of the estimate or Rs. 1 crore, whichever is less. The following may accordingly be substituted for para 2 (iii) of the letter No. WI-12 (17)/48 dated the 5th March 1948 as amended by subsequent letters referred to above :

"2 (iii). The Accountant General or the Comptroller concerned is empowered to pass any excess over the sanctioned estimates for a work upto a limit of 15% of the amount sanctioned for the work by the Government of India or Rs. 1 crore, whichever is less".

2. The exercise of the above enhanced power will be subject to the conditions already prescribed *vide* para 2 of this Ministry's letter of 20th July, 1971, namely that the excess is caused by routine factors such as increase in cost of labour or material during the period and not to the revision in the scope or enlargement of the work or of the specifications already approved. Instructions regarding rendering reports of cases where excesses have been approved by State Governments/Union Territory Administrations as contained in para 3 of this Ministry's letter of 20th July, 1971 remain unchanged.

121.5.3

No. PL-30 (110)/74

Dated the 2nd February, 1976

Subject : Permissible limit in respect of National Highways

In this Ministry's letter No. PL-30 (110)/74, dated 25-9-1974 orders were issued raising the permissible limit for admitting excess expenditure over sanctioned estimate without a revised estimate in respect of National Highway (Original) works to 15% of the sanctioned estimate or Rs. 1 crore whichever is less subject to the condition indicated in para 2 of this Ministry's letter referred to above. These orders apply to works in progress on that date. Suggestions have been made by various technical officers from time to time that these orders apply even to those works completed before the date of issue of orders. This is not correct. It is accordingly brought to the notice of all concerned that these orders apply to works in progress on the date of the issue of the aforesaid letter dated 25-9-1974 and do not have any retrospective effect. This may kindly be kept in view while dealing with all such cases.

To

1. All Technical Officers in the Roads Wing
2. All Under Secretaries
3. All Secretariat Sections.

121.5.4

No. NHIII/P/50/76

Dated the 1st July, 1976

To

All the Chief Engineers of States
(Dealing with National Highways)

Subject : Revised Estimates of National Highway (Road & Bridge) Works : Check-Lists

The revised estimates received from the State Governments are often wanting in data, designs, relevant information etc., with the result that there are to and fro references and dealys. Keeping this in view, check-lists have been devised in this Ministry for revised estimates of National Highway Road and Bridge Works. These check-lists are enclosed.

2. It may please be ensured that the estimate contents are checked with the lists and only those revised estimates are forwarded which fulfil the requirements and are comprehensive.
3. The revised estimates should continue to be forwarded in duplicate with an additional copy to this Ministry's Regional Superintending Engineer/Engineer Liaison Officer as per the extant instructions.

Enclosure to letter No. NHIII/P/50/76 dt. 1.7.76

CHECK LIST : NATIONAL HIGHWAYS (ROAD WORKS) REVISED ESTIMATES

I. ESTIMATE REPORT

1. Does the report explain the need of revising the estimate and give detailed reasons for change in scope, specifications, rates, etc., and furnish information on the alternatives considered?
2. Does the report quote the letters of the Roads Wing approving changes in scope, in horizontal and vertical profiles, in dimensions, in specifications etc. and approving higher rates through tenders? (In case any tender rate higher than the estimated rate has been accepted by the State authorities, the delegated powers under which the same has been done may please be quoted and where a higher tender rate has been accepted beyond the delegated power, the reasons for not taking approval of the Centre may please be given.)
3. For provisions of restoring damage by rains, floods etc. does the report quote the letters intimating the damages on occurrence and explain as to why restoration of the damages could not be a responsibility of the contractor?
4. Does, for the completed works, the report give reasons for not submitting the revised estimate in time?
5. Does the report narrate briefly the audit objections of significance on the work pending clearance? (It may be clearly understood that the Roads Wing reserves the right of reviewing a provision in case due to lack or inadequacy of information etc., from the State Authorities, the provision, even though under objection by the State Accountant General, gets accepted in the revised estimate.)
6. Does the report give the date of start, the target date or completion etc?

II. CERTIFICATES

1. Does the revised estimate contain the following certificates :
 - (i) That the estimate has been checked cent per cent arithmetically by a responsible officer of the State Government.
 - (ii) That the land acquisition rates are as ascertained from the competent land acquisition authority.
 - (iii) That the estimate does not provide for the cost of land belonging to the State Government and that this land will be available free of cost for the National Highway.
 - (iv) That the compensation rates for land acquisition do not include agency charges and as such agency charges have been provided separately.

III. COMPLIANCE WITH TECHNICAL AND INSPECTION NOTES :

Does the estimate contain reports of compliance with the Technical and inspection notes of the Roads Wing issued to-date.

IV. STATEMENT COMPARING THE ORIGINAL AND REVISED PROVISIONS, GIVING EXCESSES AND SAVINGS, AND THE REASONS THEREOF

Does the estimate contain a comparative statement in the form enclosed and give in detail the reasons for excesses and savings?

V. ABSTRACT OF COST

1. Has it been seen that the estimate provides for the following wherever needed :
 - (i) Erosion control measures.
 - (ii) Railing where embankment is high.
 - (iii) Ramps for intercepted State Roads.
2. Has it been seen that there is no major lump provision?
3. Has it been indicated as to which rates are based on actuals, on tender, and on the current schedule and on the analysis?
4. Does the abstract of cost account for as credit the salvage value of the dismantled material, empty bitumen drums, and usable hard stone obtained from rock-cutting?
5. Does the abstract give apportionment of cost wherever applicable between the concerned Authorities i.e. between the Road and Rail authorities for approaches to over/under bridges in replacement of level crossings; between Road and Irrigation Authorities where a road needing improvements requires diversion or raising because of coming of an irrigation project; between the Centre and the State for lengths of bypasses through municipal limits where, as per the extent policy on National Highway links, land for parallel service roads has to be acquired at the State's cost along with the land for the bypass and later on parallel service roads also to be provided by the State at their cost before urbanization is authorized.
6. Is the provision for agency charges at 7½% for work done upto 30th September, 1975, and at 9% for the balance work?
7. Is the provision for work-charged establishment as per the following?

(a) For works upto Rs. 25 lakhs	2%
(b) For works above Rs. 25 lakhs and upto Rs. 50 lakhs	1¾%
(c) For works above Rs. 50 lakhs	1½%

VI. DETAILS OF MEASUREMENTS

1. Does the estimate give clearly the details of measurements of all the items figuring in the abstract of cost including levelling course? Is the quantity of the levelling course provided in the revised estimate on 'L' and cross sections as spelled out in this Ministry's specification No. 106.3 "Measurement of pavement thickness" and not on percentage?
2. Do the measurements give separately the details of the work found necessary consequent to heavy erosion by rain, floods etc.

VII. ANALYSIS OF RATES

1. Does the estimate give analysis of all the rates which are neither covered by tenders nor by the schedule of rate?
2. Are there quarry or borrow area charts in support of the leads adopted in the rate analysis?
3. Have reasons and supporting data been furnished for changes in quarries of stone aggregate and borrow areas of earth?

VIII. DESIGNS

Does the estimate give designs and other details for new items as well as old items where there is change, covering :

- (i) Cross Sections of embankment.
- (ii) Crust thickness and composition.
- (iii) Design of sub-base, base and surfacing.
- (iv) Retaining walls etc.

IX. DRAWINGS

1. Does the estimate contain all the drawings viz., key map, index map, site plan, alignment plan, longitudinal sections, cross-sections, land acquisition plans and schedules, culverts, rest houses and inspection bungalows?
2. Do these drawings clearly show both the original and revised proposals and original and revised topography in case there be any difference?
3. Do the longitudinal and cross-sections indicate wherever relevant the highest water-table and highest flood level obtaining?

National Highway (Road Works).

STATE :

STATEMENT SHOWING EXCESS/SAVINGS AND DEVIATIONS IN COST & QUANTITIES AS COMPARED WITH THE ORIGINAL ESTIMATE IN RESPECT OF THE WORK OF.

Sl. No.	Items of work	Original sanctioned estimate		Revised Estimate			Savings/Excess due to variation in quantity				
		Qty.	Rate	Amt.	Qty.	Rate	Amt.	Qty. Cols. (6-3) (-) or (+)	Rate same as Col. 4	Savings (-) Cols. (9×10) Amount Rs.	Excess (+) Cols. (9×10) Amount Rs.
1	2	3	4	5	6	7	8	9	10	11	12
I.	As provided in the original sanctioned estimate.										
II.	New and/or deviated items	(Note : The work done/to be done by different executing agencies should be shown separately).									
III.	Centage charges										
	(a) Contingencies										
	(b) W/C establishment										
	(c) Quality control on admissible items.										
	(d) Agency charges										

Total :

Savings/Excess due to variation in Rates				Total Savings/Excess		Remarks and justifications for deviations from the sanctioned estimates
Qty same as Col. 6	Rate Cols. (7-4) (-) or (+)	Savings (-) Cols. (13×14) Amount Rs	Excess (+) Cols. (13×14) Amount Rs	Savings (-) Cols. (11+15) Amount Rs	Excess (+) Cols. (12+16) Amount Rs	
13	14	15	16	17	18	19

CHECK LIST : NATIONAL HIGHWAYS (BRIDGE WORKS) REVISED ESTIMATES

I. ESTIMATE REPORT ACCOMPANYING THE REVISED ESTIMATE

1. (a) Does the report explain the need of revising the estimate and give detailed reasons for change in scope, specifications, rate etc?
- (b) Detailed note on each of the items where huge excess has been incurred as compared to the sanctioned estimate.
2. Does the report quote the letters of the Roads Wing approving changes in scope, in dimensions, in specifications, etc., and approving tenders?
3. Does the report indicate the present stage of work (in progress or already completed)?
4. If the work is already completed, does it give reasons for not submitting the Revised Estimate in time? Further, is it accompanied with completion drawings?
5. For provision of restoring damages by rains, floods etc. does the report quote the letters intimating the damages on occurrence and explain as to why restoration of the damages could not be a responsibility of the contractor?

II. CERTIFICATES

1. Does the revised estimate contain the following certificates :
 - 1.1. That the estimate has been checked cent per cent arithmetically by a responsible officer of the State Government.
 - 1.2. *Land Acquisition, if required*
 - (i) That the land acquisition rates are as ascertained from the competent land acquisition authority.
 - (ii) That the estimate does not provide for the cost of land belonging to the State Government and that this land will be available free of cost for the National Highway bridges and appurtenant works.
 - (iii) That the compensation rates for land acquisition do not include agency charges and as such agency charges have been provided separately.
 - 1.3. That the estimate is based on actuals in case of completed works.

III. COMPLIANCE WITH TECHNICAL AND INSPECTION NOTES

Does the estimate contain reports of compliance with the technical and inspection notes of the Roads Wing issued to-date?

IV. STATEMENT COMPARING THE ORIGINAL AND REVISED PROVISIONS, GIVING EXCESSES AND SAVINGS AND THE REASONS THEREOF

Does the estimate contain the requisite comparative statement (copy of proforma enclosed) and give in detail the reasons for excesses and savings?

V. ABSTRACT OF COST

1. Has it been seen that the estimate provides for the following wherever needed?
Dismantling of diversion bridge after construction of new bridge.
2. **SUB-ESTIMATES FOR L.S. ITEMS**
Are the Lumpsum provisions made either in the original sanctioned estimate or the revised estimate supported by the detailed sub-estimates with proper justification for exceeding the sanctioned provisions, if any or for including any new items not covered by the sanctioned estimate?
3. Has it been indicated as to which rates are based on actuals, on tender, and on the current schedule and on the analysis?
4. Does the abstract of cost account for as credit the salvage value of dismantled materials of the existing structure, if any?
5. Does the abstract give apportionment of cost wherever applicable between the concerned Authorities i.e. between the Road and Rail Authorities for approaches to over/under bridges in replacement of level crossings; between Road and Irrigation Authorities where a road requires diversion or raising because of coming of an irrigation project; between the Centre and the State for lengths of bypasses through municipal limits where, as per the extant policy on National Highway links, land for parallel service roads has to be acquired at the State's cost along with the land for the bypass and later on parallel service roads are to be provided by the State at their cost before urbanization is authorized.

6. Is the provision for agency charges of 7½% for work done upto 30th September, 1975, and at 9% for the balance work?
7. Is the provision for work-charged establishment as per the following?

(a) For works upto Rs. 25 lakhs	2%
(b) For works above Rs. 25 lakhs and upto 50 lakhs	1½%
(c) For works above Rs. 50 lakhs	1%

Note : Provision for centage charges in case of completed works, should be as per actuals limited to the permissible percentages.

VI. DETAILS OF MEASUREMENTS

1. Does the estimate give clearly the details of measurements of all the items figuring in the abstract of cost?
2. Do the measurements give separately the details of the work found necessary consequent to heavy erosion by rain, floods etc?

VII. (a) CONTRACT DOCUMENTS

Is the R.E. accompanied with a copy of the contract agreement in full (not piecemeal)?

- (b) In case of items where extra due to any clause in the contract like escalation clause) is incurred, copies of necessary letters etc. justifying in detail for the extra amount on this account.

VIII. ANALYSIS OF RATES

1. Does the estimate give analysis of all the rates which are neither covered by tenders nor by the schedules of rates?
(*Note :* Analysis for supplementary tender rates have to be given)
2. Are there quarry or borrow area charts in support of the leads adopted in the rate analysis?
3. *Fluctuation in rates of materials like steel and cement*
 - (a) Does the R.E. contain the full details regarding the extra amount spent for steel and cement etc including sources and quality of materials, rates of procurement and the need for paying higher rates?
 - (b) Have reasons and supporting data been furnished for changes in quarries of stone aggregate and borrow areas?

IX. DESIGNS

- (i) Whether the bridge or guide bund is being/has been constructed at the site approved by Roads Wing?
- (ii) Whether the changes, if any, in design from those provided in the sanctioned estimate (like changes in span arrangement), change in linear waterway, type and depth of foundations etc) have been got approved from Roads Wing?
- (iii) Whether design assumptions made in the sanctioned estimate have been realised at site?
- (iv) Whether approval of the Ministry or its regional office has been obtained wherever specified in the technical notes accompanying the sanction letters?

X. DRAWINGS

1. Does the estimate contain all the drawings viz., index map, site plan, general arrangement drawing of the bridge/guide bund with supporting drawings or reference to any type drawings being used along with justification for departure, if any.
2. Does these drawings clearly show both the original and revised proposals in case there be any difference.
3. Whether the drawings have been got approved from the regional office wherever suggested in the technical notes?

XI. AUDIT PARAS

Are there any audit objections pending clearance on this work? If so, a brief report may be furnished.

XII. PENDING CLAIMS

If there are any claims pending settlement on this work, a brief report thereof may be furnished.

XIII. DEPARTMENTAL EXECUTION

If any or all the items of the work have been executed departmentally at rates different from sanctioned rates, the rate analysis of all such items may be furnished.

National Highway (Bridge Works)

STATE :

STATEMENT SHOWING EXCESS/SAVINGS AND DEVIATIONS IN COST & QUANTITIES AS COMPARED WITH THE ORIGINAL ESTIMATE IN RESPECT OF CONSTRUCTION OF BRIDGE

IN KM N.H.No. JOB No.

Sl. No.	Items of work	Original sanctioned estimate		Revised Estimate			Savings/Excess due to variation in quantity				
		Qty.	Rate	Amt.	Qty.	Rate	Amt.	Qty. Cols. (6-3)	Rate same as Col. 4	Savings (-) Cols. (9×10) Amount Rs	Excess (+) Cols. (9×10) Amount Rs
1	2	3	4	5	6	7	8	9	10	11	12
I.	As provided in the original sanctioned estimate.										
II.	New and/or deviated items (Note : The work done/to be done by different executing agencies should be shown separately).										
III.	Excess due to difference in cost of procurement and supply of materials like.										
1.	Cement										
2.	Steel										
3.	Other materials										
Total :											
IV.	Centage charges										
(a)	W/C Establishment										
(b)	Contingencies										
(c)	Quality control										
(d)	Agency charges										
Total :											
Savings/Excess due to variation in Rates				Total Savings/Excess		Remarks and justification for deviations from the sanctioned estimates					
Qty same as Col. 6	Rate Cols. (7-4) (-) or (+)	Savings (-) Cols. (13×14) Amount Rs	Excess (+) Cols. (13×14) Amount Rs	Savings (-) Cols. (11+15) Amount Rs	Excess (+) Cols. (12+16) Amount Rs						
13	14	15	16	17	18						

121.5.5
130

No. NHIII/P/14/77

Dated the 6th July, 1977

Subject : Procedure regarding processing of sanctioning of revised estimates for National Highway works received from the State Governments consequent upon the cancellation of the original contract at the risk and the cost of the original contractor, when the balance work is proposed to be entrusted to another contractor

The matter regarding the processing of the Revised Estimate for National Highway works received from the State Governments, consequent upon the cancellation of the original contract at the risk and the cost of the defaulting contractor, which might finally involve possible Government recoveries from that contractor on the settlement of the disputes in the arbitration/courts, that may

arise out of the breach of the terms and conditions of the contract and the decision of the State Government to have the balance work carried out from another contractor, has been under consideration for sometime past. The question as to whether the elements of the risk and cost (viz. full cost as per the new contract for the balance work and the original contract rates for work done before abandonment by the previous contractor) should be provided for in the Revised estimate has also been considered. It has been decided in consultation with the Integrated Finance Division that as it will not be possible to take these elements into account while examining the Revised estimate, two separate clauses, one (as in Annexure I) for incorporation in the revised sanction letter or in the letter agreeing to the excess consequent to the higher tender for National Highway road or bridge work and the other (as in Annexure II) for incorporation in the Technical note accompanying the revised sanction for a National Highway road or bridge work should be adopted forthwith in respect of all cases where the original contractor having defaulted, the work is proposed to be carried out through another contractor at the risk and the cost of the original contractor as per the terms and conditions of his agreement, so that the financial commitment arising out of the arbitration award/court decision are properly taken care of as and when the same come to be known after the announcement of the arbitration award/court decision in favour of the Government in the normal course.

2. With a view, however, to ensure that proper watch is kept on the recoveries that become due to the Government from the defaulting contractors as a result of the favourable arbitration award/court decision, it has further been decided that all the works sections in the Roads Wing should keep a note of the recoveries to be effected together with the relevant particulars in the "Job Registers" and follow them up by calling for 'Quarterly Reports' from the State Governments regarding the progress of recoveries of the Government dues and by constantly reviewing the position on their receipt, at Chief Engineer's/Director General (Road Development)'s level. All the works sections, in the Roads Wing should accordingly complete the Job registers by keeping notes therein, of the cases where Government recoveries are already due from the contractors and also by keeping these registers upto date for all times in future. The sections should also in all recovery cases immediately address the State Governments for intimating to this Ministry the latest position in respect of each case of recovery. It is needless to emphasise in this connection that the 'Job Registers' with the recovery notes duly recorded therein should invariably be kept upto date, so as to ensure that no recovery case is lost sight of in any circumstances. The sections should also ensure that the aforesaid instructions are meticulously followed and that the recoveries whenever they become due from the contractors are pursued vigorously until the same are effected in toto from the contractor (s) concerned.

Copy to : —

1. PS to DG (RD).
2. All ADG's, CE's/SE's/EE's in the Roads Wing
3. All Under Secretaries.
4. D.O.I., D.O.II & D.O.III.
5. Works Sections, Roads Wing.

ANNEXURE I

Draft of the para to be incorporated in the revised sanction or in the letter agreeing to the excess consequent to the higher tender for a National Highways Road or bridge work where the original contractor having defaulted the work is proposed to be carried out through another contractor at the risk and cost of the original contractor as per the terms and conditions of his agreement.

The revised technical approval and sanction to the work allowing an excess over the originally sanctioned cost of the work consequent to higher tender is on the understanding and stipulation that the State Government would recover from the defaulting contractor the extra amount so involved as per the terms and conditions of the agreement and of effecting the recovery would credit the amount to the expenditure account of the work-sanctioned in question thus nullifying the corresponding excess. It is imperative that the State Government would try their level best and take all necessary and positive steps to effect the recovery and would pursue the case vigorously upto the end. The State Governments are requested to send us a quarterly report on the progress made on effecting the recovery.

ANNEXURE II

Draft of the comment to be incorporated in the Technical Note to accompany the revised sanction for a National Highway road or bridge work where the original contractor having defaulted the work is proposed to be carried out through another contractor at the risk and cost of the original contractor as per the terms and conditions of his agreement.

Most of the excess is due to the fact that the original contractor having defaulted the work is proposed to be carried out through another contractor at the risk and cost of the original contractor as per the terms and conditions of his agreement. Accordingly this revised sanction is on the understanding and stipulation that the State Government would try their level best to effect recovery and would pursue the case vigorously upto the end by taking all necessary and possible steps. It is expected and stipulated that after the

recovery, the amount will be credited to the expenditure account of the work-sanction in question thus nullifying the corresponding excess. The State Governments are requested to send us a quarterly report on the progress made on effecting the recovery.

121.5.7

No. NHIII/P/25/78

Dated the 24th May, 1978

To

The Secretary to the Govt. of PWD (State Govts.)

Subject : Submission of Revised Estimates for works on National Highways

I am directed to say that in one of the revised estimate cases submitted to the Union Cabinet for approval, it was noted that the actual expenditure on the project had far exceeded the original sanction and that there was considerable delay in seeking the approval of Government to the Revised Estimate. While taking a serious exception to this state of affairs, they have directed that in future responsibility for such lapses should be fixed in such cases.

2. The need for urgency for submitting promptly and in time for Government approval, the detailed revised Estimates in respect of National Highway works where the cost is likely to exceed the sanctioned amount beyond the permissible limit has been stressed to the State PWDs and State Chief Engineers on a number of occasions in the past. You are already aware that the rules framed by the Government of India under the N.H. Act, 1956 include a clear requirement in this regard as indicated below :—

"When the expenditure upon any original work on National Highways to the detailed estimate of which the Central Government has accorded technical approval and financial sanction exceeds, or is likely at any time to exceed, the amount of such estimate beyond the permissible limit, the executive agency shall forward a revised detailed estimate for such work to the Central Government in such form as the Central Government may require and the Central Govt. may accord technical approval and financial sanction to such estimates subject to any condition it may think fit to impose".

3. The Codal provisions contained in the CPWD and other codes also clearly lay down that :—

- (a) any excess expenditure over sanctioned estimate beyond the permissible limit shall require revised sanction which should be applied for as soon as excess is foreseen; and
- (b) in case there is likely to be some delay due to unavoidable circumstances in the preparation of Revised Estimate, an immediate report of these circumstances should be made to the authority whose sanction will ultimately be required and thereafter a revised estimate submitted to that authority for approval with utmost expedition.

4. All these requirements are already well known to the State PWDs/State Chief Engineers and have been brought to their notice on a number of occasions *vide* this Ministry's letters No. B-18 (2)/67, dated 23.2.1972, B-30 (54)/73, dated 6.2.1974, B-30 (54)/76, dt. 13.8.1976 and B-30 (54)/77 dated 30.5.1977. In addition, this matter has also been discussed at almost all the meetings of the State Chief Engineers as would be clear from the minutes of the meetings held at Bhubaneswar in May, 1969, Darjeeling, 1970, Delhi, 1970, Cochin, 1973, Delhi, 1974, Chandigarh, 1975, Hyderabad, 1976 and Calcutta, 1977. The matter has also been raised at the meetings of the Transport Development Council and Standing Committee on Roads of the Transport Development Council. The requirement of submitting the revised estimates in time and quickly has also been brought to the notice of the State Governments almost every year while making annual final allotments for National Highway (original) Works.
5. Notwithstanding all these continued measures and persistent efforts, both at the official and personal levels, the position has not improved in the desired manner and even now there still continues to be a considerable time lag in the submission of Revised Estimates of National Highways Works while in some cases, Revised Estimates have not been submitted much against the instructions on the subject. Also, in many cases expenditures over and above the limit continue to be incurred. The result of all this is, that, while on the one hand the Codal formalities are not being taken care of, on the other hand, it is creating problems for Government of India in providing funds for such works beyond sanctioned costs over and above the permissible limits, as strictly speaking, no such funds can be allotted without the sanction of the Revised Estimates by the competent authority. Any payment in such cases may not at all be possible now in view of the recent departmentalisation of accounts.
6. It is, therefore, reiterated that suitable corrective measures may be taken by all concerned to ensure that all projects where the cost has exceeded the sanctioned amount beyond the permissible limit or it likely to so exceed, are looked into immediately and steps taken without delay to submit properly formulated Revised Estimates with full justification wherever this has not been done so far. In cases

where the expenditure has already exceeded the permissible limit, the revised estimates should be sent to this Ministry immediately without any loss of time.

7. I am further to add that while submitting the revised estimates, complete information has to be furnished indicating the reasons for revision in the costs and the provisions, information etc. are to be checked with the list forwarded vide this Ministry's letter No. NHIII/P/50/76, dated 1st July, 1976. In cases where the original scope has undergone change, specific reasons need to be indicated leading to such a change together with circumstances in which approval of the competent authority could not be obtained in time and also stating the action taken to avoid recurrence of such a situation and to fix responsibility for individual lapses, if any.
8. I am to request that the steps taken by you to ensure timely submission of revised estimates to this Ministry may please be intimated immediately.

121.5.9

No. NHIII/P/25/78

Dated the 12th Nov., 1979

To

The Secretary to the Govt. of
P.W.D. (All State Governments and Union Territories)

Subject : Submission of revised estimates for works on National Highways-Periodical
review of expenditure/construction period and physical progress on works

The urgent need for timely submission of revised estimates has been brought to the kind notice of the State Governments and also to the State Chief Engineers dealing with the execution of works on National Highways through numerous detailed letters from the Ministry (noted below for ease in reference). This requirement has also been pointed out a number of times to the State Chief Engineers in the All-India Chief Engineers' meetings (which are normally held twice a year) and also in the meetings of the Transport Development Council, since the matter of incurring expenditure beyond permissible limits in excess of the sanctioned cost, financial irregularity is quite serious deserving their immediate personal attention.

No. B-18 (2)/67 dated 23.2.72

No. B-30 (54)/73, dated 6.2.74

No. B-30 (54)/76, dated 13.8.76

No. B-30 (54)/77, dated 30.5.77 and

No. NHIII/P/25/78, dated 25.5.78, 20.3.79, 23.8.79

2. In order to expedite the acceptance of tenders of National Highway works, the State Governments/State Chief Engineers were delegated powers by the Ministry vide our letter No. PL-30 (62)/76 dated the 26th June, 1976 to accept tenders themselves if the excess over the sanctioned estimate does not go beyond the value determined on the basis of the current schedule of rates by 15% subject to the condition that there is no material deviation from approved designs/or specifications for the work-in-which, later case, however, prior approval of the Government of India is necessary. An important attendant requirement to the exercise of these delegated power by the State Governments/State Chief Engineers (which had been clearly spelt out in our previous correspondence on the subject) is that after the tenders have been accepted by the State, revised estimate for the work should be sent to the Government of India within one month of the acceptance of the tenders for obtaining revised sanction; this time limit being extended upto two months in unavoidable cases but in any case not beyond that. A similar requirement for the submission of revised estimates had also been spelt out for works where the tenders had been accepted after obtaining the approval of the Government of India and where with the accepted tender rates an excess beyond 15% of the sanctioned cost was expected. It has also been clearly brought to the notice of the State Governments/State Chief Engineers that it would not be possible for the Ministry to allot funds over and above the permissible limits of excess beyond the sanctioned cost unless revised estimates, where due are got sanctioned in due time and in the event of any contractual complications for want of allotment of funds in such cases the responsibility would entirely rest with the State Chief Engineer/Government.
3. Unfortunately, there has not been satisfactory improvement in the timely submission of the revised estimates although the rules clearly require that revised financial sanction of the competent authority should be obtained immediately if excess expenditure over the sanctioned estimate beyond the per-

missible limit is foreseen or anticipated. It is therefore, once again reiterated that the State Government/State Chief Engineer may kindly ensure that immediately on the acceptance of the tenders (within their delegated powers or after the approval of the Government of India) revised estimates, where necessary, are submitted, within the stipulated time period. This would ensure execution of works without any likely disruption or set back in progress for want of allotment of funds at least upto the revised estimated cost based on the accepted tenders. Any further increase in cost may be expected when the work is in progress can be provided in the 2nd revised estimate which should be prepared well in time to obtain revised financial sanction well in advance of exceeding the first revised cost.

4. In order to avoid delay in the timely submission of revised estimates, periodical monitoring of expenditure as well as of the physical progress *vis-a-vis* time period of construction based on the long prescribed system of submitting quarterly progress reports is vitally essential. It has further been decided in consultation with the Ministry of Finance, Government of India, that for all National Highway works, a special review should be made by the State Government/State Chief Engineer for each individual work when 50% of the sanctioned cost has been incurred or when 50% of the time allotted for the completion of the work has been spent, whichever happens to be earlier, so as to enable the State Government/State Chief Engineer to assess the likely completion cost of the work as well as the revised time required for completing the same. The result of such a review should then be intimated to the Ministry and steps taken by the State Government/State Chief Engineer for submission of the revised estimates so that revised financial sanction is obtained sufficiently in time to avoid any excess beyond the permissible limits. In any case, revised sanction, when required, must be obtained within a period of three months after the above review.
5. This matter regarding the review of works as mentioned in para 4 above and the urgent need for timely submission of revised estimates where necessary, was also discussed in the All India Chief Engineers meeting held at Gauhati on the 27th October, 1979.

121.5.10
130

No. PL-30 (6)/80

Dated the 19th January, 1980

To

The Secretary to the Govt. of P.W.D
(Deptt. dealing with National Highways).

Subject : Submission of Revised Estimates for National Highways, etc.

I am directed to say that, as already brought to the notice of the State Governments on a number of occasions in the past, the Ministry are greatly concerned over the time taken by the State Governments, in submitting revised estimates where the cost exceeds the sanctioned estimate beyond the permissible limit, etc. or where the States have been delegated powers to accept tenders upto 15% of the State's current schedule of rates subject to the production of the Revised Estimates based on the tenders. Recently, this matter also figured during a discussion held in Expenditure Secretary's room regarding the cost/time over-runs in the case of National Highway (Original) works when it was decided to request the State Governments kindly to ensure that :—

- (i) in cases where the States are required to seek prior approval of the Government of India in accepting a tender for a particular work in the event of the tendered cost exceeding the sanctioned estimate beyond permissible limit, *the tender case should be sent to this Ministry along with necessary revised estimate on the basis of the tenders* so that the Ministry is able to deal with the tender and the revised estimate as one collective reference and do not experience difficulty subsequently in getting a revised estimate after clearing the tender and
 - (ii) in the case of tenders falling within the powers delegated to the States vide this Ministry's letter No. PL-30 (62)/76, dated the 26th June, 1976 empowering the States to accept tenders upto 15% of the current schedule of rates subject to certain conditions stipulated therein, thereafter the State Governments shall accept the tenders under this power only if the State Governments have sent the same day or before accepting the tenders revised estimates to the Government of India for their technical approval and financial sanction and a certificate is recorded by the State Governments while accepting the tenderers that such a revised estimates has been sent to the Government of India, the idea obviously being that in regard to the tenders being accepted by the States within the delegated powers referred to above, a revised estimate based thereon should be dealt with and sanction decisions taken by the Government of India more or less simultaneously with the acceptance of the tender and the delay at present expressed is cut out.
2. I am to add that in order to avoid delay in the timely submission of revised estimates, periodical monitoring of expenditure as well as of the physical progress *vis-a-vis* time period of construction based on the long prescribed system of submitting quarterly progress reports is vitally essential, and it has

submission of revised estimates timely and complete in all respects. Action taken or proposed to be taken in the matter may also be intimated to this Ministry urgently.

3. I am to add that since allocation of funds for work where revised estimates have not been sanctioned by the Competent Authority, is not in order, it is likely allocation of funds against such works might, be withheld if no sanction is obtained to revised estimates in time. This aspect may, therefore, be brought to the notice of all concerned for strict compliance.

121.5.14
121.6

No. RW/NHIII/COORD/32/84

Dated the 19th May, 1984

To

The Secretaries of all State Governments
(Department dealing with Roads)

Subject : Recommendations of Vohra Committee—Prior approval of Ministry for changing scope of the sanctioned estimates

I am directed to say that the Vohra Committee on National Highway Agency System have, inter-alia, recommended that the State Chief Engineers should take prior approval of the Ministry before permitting changes in the sanctioned estimates, in terms of scope of the project, specification and design.

2. I am accordingly to request that in all such cases of sanctioned estimates, prior approval of this Ministry may be obtained whenever there is change in the scope of the project, specification and design, failing which the increase in the cost due to change in the scope of work shall be debited to the State funds and the State Government shall be responsible for sub-standard work due to the change in the scope of specification, design, standards etc. stipulated by this Ministry.

121.5.15

No. NHIII/P/25/78

Dated the 5th July, 1985

To

The Secretary to the Government of
All States and Union Territories
(Public Works Departments)

Subject : Submission of revised estimates for works on National Highways—periodical review of expenditure/construction period and physical progress on works

The urgent need for timely submission of revised estimates has been brought to the kind notice of the State Governments and also to the State Chief Engineers dealing with the execution of works on National Highways through numerous detailed letters from the Ministry (noted below for reference). This requirement has also been pointed out a number of times to the State Chief Engineers in All-India Chief Engineers meeting and also in the meetings of the Transport Development Council, since the matter of incurring expenditure beyond permissible limits in excess of the sanctioned cost—a financial irregularity is quite serious deserving their immediate personal attention.

No. B-18 (2)/67 dated 23.2.72.

No. B-30 (54)/73 dated 6.2.74.

No. B-30 (54)/76 dated 13.8.76

No. B-30 (54)/77 dated 30.5.77 and

No. NHIII/P/25/78 dated 25.5.78, 20.3.79, 23.8.79 and 12.11.79.

2. In order to expedite the acceptance of tenders of National Highway works, the State Governments/State Chief Engineers were delegated powers by the Ministry vide our letter No. PL-30 (62)/76 dated the 26th June, 1976 to accept tenders themselves if the excess over the sanctioned estimate does not go beyond the value determined on the basis of the current schedule of rates by 15% subject to the condition that there is no material deviation from approved designs/or specifications for the work in which latter case, however, prior approval of the Government of India is necessary. An important attendant requirement to the exercise of these delegated powers by the State Governments/State Chief Engineers (which had been clearly spelt out in our previous correspondence on the subject) is that

after the tenders have been accepted by the State Governments/State Chief Engineers themselves, revised estimate for the work should be sent to the Government of India within one month of the acceptance of the tenders for obtaining revised sanction: this time limit being extended upto two months in unavoidable case but in any case not beyond that. A similar requirement for the submission of revised estimates had also been spelt for works where the tenders had been accepted after obtaining the approval of the Government of India and where with the accepted tender rates an excess beyond 15% of the sanctioned cost was expected. It has also been clearly brought to the notice of the State Governments/State Chief Engineers that it would not be possible for the Ministry to allot funds over and above the permissible limits of excess beyond the sanctioned cost unless revised estimates where due are got sanctioned in due time and in the event of any contractual complications for want of allotment of funds in such cases the responsibility would entirely rest with the State Government/State Chief Engineer.

3. Unfortunately, there has not been satisfactory improvement in the timely submission of the revised estimates although the rules clearly require that revised financial sanction of the competent authority should be obtained immediately an excess expenditure over the sanctioned estimate beyond the permissible limit is foreseen or anticipated. It is, therefore, once again reiterated that the State Governments/State Chief Engineer may kindly ensure that immediately on the acceptance of the tenders (within their delegated powers or after the approval of the Government of India) revised estimates, where necessary, are submitted within the stipulated time period. This would ensure execution of works without any likely disruption or set back in progress for want of allotment of funds at least upto the revised estimated cost based on the accepted tenders. Any further increase in cost that may be expected when the work is in progress can be provided in the 2nd revised estimate which should be prepared well in time to obtain revised financial sanction well in advance of exceeding the first revised cost.
4. In order to avoid delay in the timely submission of revised estimates, periodical monitoring of expenditure as well as of the physical progress *vis-a-vis* time period of construction based on the prescribed system of submitting quarterly progress reports is vitally essential. It is therefore requested that for all National Highway works, a special review should be made by the State Government/State Chief Engineer for each individual work when 50% of the sanctioned cost has been incurred or when 50% of the time allotted for the completion of the work has been spent, whichever happens to be earlier, so as to enable the State Government/State Chief Engineer to assess the likely completion cost of the work as well as the revised time required for completing the same. The result of such a review should then be intimated to the Ministry and steps taken by the State Government/State Chief Engineer for submission of the revised estimates so that revised financial sanction is obtained sufficiently in time to avoid any excess beyond the permissible limits. In any case, revised sanction, when required, must be obtained within a period of three months after the above review.
5. In one of the revised estimate cases the Finance Ministry has observed as under :—

The State PWDs must ensure strict compliance of the instructions issued by the Ministry of Shipping and Transport so that whenever it is visualised that the sanctioned estimate will need revision based upon the physical as well as financial progress, immediate action is taken to submit and have sanctioned the revised estimate before incurring expenditure beyond the permissible limits. In case of any lapse on this account, the Finance Ministry will not agree to the revised estimate being sanctioned in future.
6. In view of the above observation, it is requested that necessary instructions to the officers in the field may kindly be issued to scrupulously follow the instructions of the Ministry as stated above.

121.6 DELEGATED POWERS TO STATES AND SPLITTING OF WORKS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No</i>
121.6.1 (124.2)	CR/Misc/22/73 dt. 14.12.73	Union Territories-Highway Projects-Splitting up of Estimates	See Code No. 124.2
121.6.2 (130)	PL-30 (62)/76 dt. 26.6.76	Powers Regarding Acceptance of Tenders for Road and Bridge Works on National Highways	See Code No. 130
121.6.3	PL-30 (193)/71 dt. 5.1.77	Delegation of Powers to States to Sanction Detailed Plans and Estimates in respect of NH (O) works.	121.6/1
121.6.4	NHIII/P/7/77 dt. 22.7.77	Delegation of Powers to State PWDs—Clarification Regarding the Technical Approval and Financial Sanction being Accorded by State Government under the Delegated Powers to Estimates for Road Over/Under Bridges Costing less than Rs. 10 Lakhs	121.6/1
121.6.5	NHIII/P/9/77 dt. 21.9.77	Delegation of Powers to States to Sanction Detailed Plans and Estimates in Respect of NH (O) Works : Procedure for According Administrative Approval.	121.6/1
121.6.6 (130)	NHIII/P/22/77 dt. 30.11.77	Splitting up of Sanctioned Estimates for Purpose of Calling Tenders for NH Road Works-Delegation of Powers to the State Chief Engineers-Regarding	121.6/2
121.6.7	NHIII/P/9/77 dt. 4.4.1981	Delegation of Powers to States to Sanction Detailed Plans and Estimates-Procedure for According Administrative Approval	121.6/3
121.6.8 (121.5)	DO No. B-30 (41)/81 dt. 14.7.81	Regarding Prior Approval for the NH Works where Expenditure Exceeds the Sanctioned cost Beyond Permissible Limit	See Code No. 121.5
121.6.9	NHIII/P/3/83 dt. 11.3.83	Substitution of Works	121.6/4
121.6.10 (121.2)	RW/NHIII/Coord/34/84 dt. 24.3.84	Recommendations of Vohra Committee Regarding NH Works Costing less than Rs. 10 lakhs for which Administrative Approval is Accorded.	121.6/4
121.6.11 (121.5)	RW/NHIII/Coord/32/84 dt. 19.5.84	Recommendations of Vohra Committee-prior Approval of Ministry for Changing Scope of the Sanctioned Estimates	See Code No. 121.5
121.6.12	NHIII/P/16/80 dt. 26.7.84	Recommendation of Vohra Committee regarding NH Works Costing less than Rs 10 Lakhs for which Administrative Approval is Accorded	121.6/5
121.6.13	NHIII/P/25/84 dt. 4.8.84	Splitting up of NH Works- Regarding	121.6/5

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
121.6.14	RW/NHIII/Coord/34/84 dt. 14.11.84	Recommendations of the Vohra Committee regarding NH Works Costing less than Rs 10 Lakhs for which Administrative Approval is to be Accorded-Clarification	121.6/6
121.6.15	RW/NHIII/Coord/34/84 dt. 12.12.84	Recommendations of Vohra Committee Regarding NH Works Costing less than Rs 10 Lakhs for which Administrative Approval is to be Accorded	121.6/6

No. PL-30 (193)/71

Dated the 5th January, 1977

To

All State Govts. and Admns. of
Union Territories
(Depts. dealing with National Highways)

Subject : Delegation of Powers to States to sanction detailed plans and estimates in respect of National Highway (Original) Works

I am directed to say that, as the State Govts. are aware, under the Constitution, National Highways are a Central subject and the Govt. of India are primarily responsible for their development and maintenance. However, the actual execution is being carried out by the State P.W.Ds. on an agency basis for the Govt. of India on the basis of technical approval and financial sanction accorded by this Ministry to detailed plans and estimates in pursuance of the rules contained in this Ministry's notification No. SRO-1182, dated the 4th April 1957. There has, however, been a demand for sometime past for delegating powers to State P.W.Ds. for according technical approval and financial sanction to expedite the progress on works programmes. The Govt. of India have considered the matter carefully and are pleased to agree to delegate powers to the State P.W.Ds. to accord technical approval and financial sanction to detailed plans and estimates for National Highway (Original) works costing upto and including Rs. 10 lakhs subject to the conditions indicated in the schedule to this Ministry's notification No. SO 680 (E) dated the 15th October, 1976. A copy of this notification is enclosed. This notification was published in the Gazette (Extraordinary) dated 18th October 1976 and also incorporates certain other connected amendments in the earlier National Highway Rules. Further necessary action may kindly be taken in the light of the enclosed notification.

Note : Notification dated 18.10.76 not enclosed.

No. NHIII/P/7/77

Dated the 22nd July, 1977

Subject : Delegation of powers to State PWDs-clarification regarding the Technical Approval and Financial sanction being accorded by the State Governments under the delegated powers to estimates for Road over/under bridges costing less than Rs 10 lakhs

A question has been raised whether the State Governments (Departments dealing with N.Hs)/State PWDs are competent to accord technical approval and financial sanction to estimates for Road over/under bridges costing less than Rs 10 lakhs. (which are deposit works execution of which is undertaken by Railways) under the powers delegated to them vide this Ministry's letter No. PL-30 (193)/72 dated the 5th January, 1977. The matter has been considered and it has been decided that since the estimates for road over/under bridges are received by the Roads Wing through the State Governments, and also the payment to the railways is routed through them, there is no objection to the States sanctioning estimates for Road/over/under bridges under the delegated powers after these estimates have been administratively approved by this Ministry, as per the procedure in the case of other estimates.

Copy for information and guidance to All Works Sections in the Roads Wing, All Technical Officers in the Roads Wing, All Under Secretaries/D.O. (II) D.O. (III), P.S. to ADG (B), P.S. to DG (RD) & Additional Secretary.

No. NHI/P/19/77

Dated the 21st Sep., 1977

Subject : Delegation of powers to States to sanction detailed plans and estimates in respect of National Highways (Original) Works-Procedure for according Administrative Approval

Recently powers have been delegated to the State Governments to sanction detailed plans and estimates in respect of National Highway (Original) Works not exceeding Rs 10 lakhs vide this Ministry's letter No. PL-30 (193)/71, dated the 15th January, 1977 subject to the conditions specified in the schedule to this Ministry's Notification No. SO-680 (E) dated the 15th October, 1976, a copy of which was also circulated to all concerned along with the above letter. The Roads Wing is, however, required to give administrative approval to such estimates before the States accord Technical Approval and Financial Sanction under the delegated powers. The question of evolving a uniform procedure for according administrative approval in such cases was under consideration in consultation with the Finance Division. It has now been decided that it is not necessary for the Roads Wing to consult the Finance Division in such cases, and the administrative approval may be accorded on the

basis of rough cost estimate, provided other conditions prescribed in the Schedule annexed to the aforesaid Govt. notification are fulfilled. It has also been decided that the provision for these works should be included in the workwise allotment to be communicated to the State Governments following the passage of Budget by the Parliament.

2. It has also been decided that while according the administrative approval, the following further information may also be added in the approval letter :
 - (i) A separate series of Job numbers with the prefix "A/A" should be started by the Works Sections. Job number should be given on the same lines as for works sanctioned by this Ministry as indicated below :
Job No. "A/A-193/PB/I"
 - (ii) The Head of Account to which the expenditure is debitable should be indicated.
 - (iii) A copy of the administrative approval may be endorsed each to the concerned Accountant General and the Pay & Accounts Officer as is being done in the case of sanction letters issued by this Ministry for estimates costing more than Rs. 10 lakhs.
 - (iv) A model of the draft letter to be used for according administrative approval is attached for guidance. (Superseded on 4.4.81).
3. All the works Sections in the Roads Wing are requested to follow strictly the above procedure for the purpose of according administrative approval to plans and estimates costing less than Rs. 10 lakhs to the State Govts. to enable them to technically and financially sanction the work under the delegated powers.

121.6.6.

130

No. NH11/P/22/77

Dated the 30th November, 1977

To

The Secretary to the Government of Madhya Pradesh, P.W.D. Bhopal

Subject : Splitting up of sanctioned estimates for purpose of calling tenders for NH Road Works—Delegation of powers to the State Chief Engineers—regarding

With reference to your letter No. D.275/307/XIX/77, dated the 17th February, 1977 on the subject noted above, I am directed to say that in the interest of economy and expediency our NH and other rules do not prohibit inviting of tenders (for road works) for individual items or groups of items and that too for small lengths of the road. There is, therefore, no objection to the splitting of the sanctioned estimates for NH Road works for the purpose of inviting tenders. The State Chief Engineer, may however consider adopting either the proposed splitting method or awarding of somewhat composite type and bigger sized contracts, depending upon the factors like situation, nature of each work, availability of contractors, and Govt. Construction Corpn. etc. coming forward for the work, keeping in mind, in every case that good competition would be created amongst the bidders.

2. I am, however, to request that the splitting up of the sanctioned estimates for purposes of tenders be resorted to subject to fulfilment of all the conditions mentioned in this Ministry's circular No. PL-30 (62)/76, dated the 26th June, 1976 regarding delegation of powers to the State Governments for acceptance of tenders on National Highways. It may be ensured that tenders for all the split up portions are decided at one and at the same time with a view to determine whether the cost of the work is likely to exceed the permissible limits or not and in case the cost is likely to go beyond the permissible limits, the revised estimates should be sent to this Ministry within one month of the acceptance of the tenders, this time limit being extended upto two months in unavoidable cases, as stipulated in the above circular letter.
3. I am further to say that in cases where it is not feasible/practicable for reasons to be recorded in writing to take decision on the tenders of all the split up Groups/Parts at a time, the delegated powers of 15% excess should be applied to every Group/Part of the estimated cost of each Group/Part based on 1976-77 Schedule of rates separately and if the tendered amount of any group exceeds the permissible limits of 15% over the estimated cost of the total particular group the State PWD should refer the tenders to this Ministry for consideration.

Copy forwarded for information to Regional Officers of Ministry of Shipping & Transport

No. NHIII/P/9/77

Dated the 4th April, 1981

Subject : Delegation of powers to States to sanction detailed plans and estimates in respect of National Highways (Original) Works—Procedure for according Administrative Approval.

Attention is invited to this Ministry's circular letter of even number dated the 21st September, 1977 wherein a model draft for conveying administrative approval in respect of National Highways (Original) Works falling within delegated powers (below Rs. 10.00 lakhs) was circulated. Finance Division has desired that while conveying the administrative approval to such works, we should also include other normal conditions as we are doing in the case of sanctions for works costing more than Rs. 10.00 lakhs. Accordingly, a revised model draft is enclosed for your guidance and necessary action.

Copy issued to All Technical Officers in the Roads Wing, All Works Sections in the Roads Wing, Budget Section (Roads Wing), New Delhi, All Under Secretaries (Roads Wing) and Desk Officer II/Desk Officer III (Roads Wing), P.S. to Additional Director General (Bridges), P.S. to Additional Director General (Roads), P.S. to Director General (Road Development) and Additional Secretary.

MODEL DRAFT LETTER FOR CONVEYING ADMINISTRATIVE APPROVAL IN RESPECT OF NATIONAL HIGHWAYS (ORIGINAL) WORKS FALLING WITHIN THE DELEGATED SPHERE OF THE STATES

No. _____ New Delhi-110 001, the _____

To

The Secretary to the Govt. of _____ Public Works Department _____ (Departments dealing with National Highways)

Subject : (Here give the name of the work)

(Job No. A/A — No. of work/State/National Highway No.).

With reference to the letter No. _____ dated the _____ from the State/U.T. Chief Engineer, Public Works Department, forwarding therewith a rough cost estimate for Rs. _____ for the administrative approval of this Ministry for the above mentioned work, I am directed to say that the estimate has been examined by the Director General (Road Development) and modified to Rs. _____, subject to the comments contained in the enclosed technical note.

2. I am directed to convey the administrative approval of the Government of India to the above estimate as modified for a sum of Rs. _____ inclusive of all charges including agency charges at the rate of 9%. I am now to request you kindly to accord technical approval and financial sanction to the detailed estimate for this work in accordance with this Ministry's letter No. PL-30 (193)/71, dated the 5th January, 1977 whereby the State Governments are empowered to accord technical approval and financial sanction to the detailed estimate for National Highways (Original) works costing upto Rs. 10.00 lakhs subject to the conditions laid down in the schedule annexed to this Ministry's notification No. SO 680 (e) dated the 15th October, 1976.
3. The estimate is being returned to the State Chief Engineer. It is requested that a copy of the technically approved and financially sanctioned estimate complete in all respects together with a copy of the sanction may be sent to this Ministry's Regional Office under intimation also to the Engineer Liaison Officer for information and action, if any, in accordance with the conditions laid down in the Schedule to this Ministry's notification referred to in the preceding paragraph. Further, an abstract of cost of sanctioned estimate and general outline drawings in the case of bridges may also be sent to this Ministry.
4. The administrative approval is also subject to the following conditions :
 - (i) The expenditure during the current year on this work as also on other sanctioned works, does not exceed the allotment placed at the disposal of the State Government during the year.
 - (ii) In accordance with the orders contained in this Ministry's Circular letter No. PL-30 (6)/80, dated the 19th January, 1980, addressed to the State Public Works Departments, if due to the tender action it is necessitated that the Revised Estimate of the work will have to be sanctioned as the tender cost exceeds the permissible limits, immediate action will be taken to get the Revised Estimate sanctioned; and
 - (iii) Further, on completion of 50% work, if the appraisal of the project shows that it will necessitate revision of estimate based upon the physical completion of the project vis-a-vis financial expenditure, immediate action should be taken to submit the Revised Estimate so as to ensure that the sanctioned Revised Estimate is available before necessity for incurring expenditure beyond permissible limits arises.
 - (iv) The work is completed as per the physical and financial targets given below :

Physical Targets :

 - (a)
 - (b)
 - (c)

Financial Targets

- (a)
- (b)
- (c)

5. After the expenditure sanction has been issued by the competent executive authority in accordance with the conditions laid down in the schedule to this Ministry's notification referred to in para 2 above, the expenditure shall be debitable to the sub-head AA-Capital Outlay on Roads and Bridges-AA-National Highways-AA-1 (1)-Major Works, AA-1 (1) (1)-Works under the Roads Wing subordinate to the major head "537" for which the correspondence Demand Number for the current financial year is '_____'. .
6. Quarterly progress reports in the stipulated proforma may be sent to this Ministry as is being done for all sanctioned works.

Yours faithfully,

US(NH)

Encl: As above.

Copy forwarded to : (1) The Accountant General, (2) The Pay and Accounts Officer, Ministry of Shipping and Transport (Roads Wing), (3) Director of Audit, Commerce, Works and Miscellaneous, A.G.C.R. Building, Indira Prastha Estate, New Delhi-110 002.

Copy with a copy of the technical note forwarded to (i) The Chief Engineer, (National Highways), Public Works Department, _____ (2) The Superintending Engineer, Ministry of Shipping and Transport, (Roads Wing) _____ (3) The Executive Engineer Ministry of Shipping and Transport, (Roads Wing), _____ .

121.6.9

No. NHIII/P/3/83

Dated the 11th March, 1983

Subject : Substitution of National Highway and other Centrally sponsored works already included in the approved Plan/Priority list

Recently it has come to the notice of this Ministry that a project was sanctioned by this Ministry in 1979 from CRF. However, the State Chief Engineer subsequently came up with a proposal for sanctioning another project in substitution of the above project. While the revised proposal was still under consideration, the State Chief Engineer wrote back again saying that the State Govt. had not agreed to the revised proposal for the substitution of the project as earlier proposed by him. This leads to unnecessary work and can at time's lead to a rather embarrassing situation. In order to avoid such situations in future, it has been decided that whenever any proposal is received for substitution of any project already approved by this Ministry, the approval/comments of the State Govt. must invariably be obtained and the matter should be brought to the notice of DG (RD) & Addl. Secretary and the concerned officer on the Secretariat side before taking a decision on the proposal.

To

1. All Officers of the rank of Superintending Engineer and above in the Roads Wing.
2. All Works Sections in the Roads Wing.

121.6.10
121.2

No. RW/NHIII/COORD/34/84

Dated the 24th March, 1984

To

The Secretaries of all States,
Public Works Departments
(dealing with National Highways)

Subject : Recommendations of Vohra Committee regarding National Highway Works costing less than 10 lakhs for which Administrative Approval is accorded.

I am directed to say that the Committee on Agency System for National Highways had inter-alia recommended that for works costing less than 10 lakhs, the State Government should prepare a detailed estimate and forward only the abstract of estimate indicating various quantities, rates and amounts to the Ministry for according Administrative Approval. The Committee, further recommen-

ded that the Administrative Approval should be issued subject to the condition that the State Chief Engineers concerned would accord technical sanction to the estimate within 3 months of the date of according Administrative Approval and actual work must start within another 6 months from the date of issue of Technical sanction. Further, failure to abide by these time limits should result in automatic cancellation of the Administrative Approval.

2. The Government of India have since accepted this recommendation and I am, therefore, to request that it may be ensured that abstract of estimates is only forwarded to this Ministry and technical sanction is accorded within 3 months of date of Administrative Approval and actual execution of the work starts within another 6 months from the date of issue of technical sanction failing which the Administrative Approval would be deemed to have been cancelled and fresh Administrative Approval will have to be obtained. This may please be brought to the notice of all concerned.

121.6.12

No. NHIII/P/16/80

Dated the 26th July, 1984

To

Secretaries of all States, Public Works Departments dealing with National Highways.

Subject : Recommendations of Vohra Committee regarding National Highway works costing less than Rs. 10 lakhs for which administrative approval is accorded.

I am directed to refer to this Ministry's letter No. RW/NHIII/Coord/34/84 dated 24th March 1984 on the subject mentioned above and to say that the orders contained therein supersede the orders conveyed in this Ministry's letters No. NHIII/P/16/80 dated 6.1.83 and No. NHIII/P/16/80 dated 28.3.83.

121.6.13

No. NHIII/P/25/84

Dated the 4th August, 1984

To

All State Governments/Union Territories,
(dealing with National Highways and Centrally sponsored Works)

Subject : Splitting up of National Highway Works—regarding

I am to refer to this Ministry's letter of even number dated 5th January 1984 vide which recommendations of Vohra Committee were forwarded to you for taking necessary action at your end. The recommendation No. 10 reads as under :

"The present system of letting out contracts for National Highway works by splitting up the work horizontally favours small contractors who do not possess requisite expertise, finance or equipment to carry out the works of the desired quality. Deliberate steps need to be taken to encourage the emergence of well qualified contracting firms or cooperatives of small contractors who have the capacity for carrying out quality work on the requisite scale".

The National Highway Works sanctioned by the Ministry are executed by the Public Works Departments either departmentally or by letting out the work to the contractors. It has been observed that most of the Public Works Departments at the time of letting out the work, split the works horizontally or vertically. This favours the small contractors who do not possess requisite expertise and resources to carry out the works of desired quality. Since the National Highway Projects are required to be executed with stringent quality control so that the serviceability is maintained for the design period, the work done by the small contractors is not likely to be of good quality besides it would not be possible to fix the clear cut responsibility in case of sub-standard work if the subletting has been done horizontally. Moreover, the number of small independent agencies working on a particular job could cause the loss of control over the work and lead to time and cost over-run.

2. If a single contractor or agency is involved for the execution of work, the entire project could be scheduled properly and executed according to specifications. It is, therefore, necessary that deliberate steps are taken by the authorities to encourage the emergence of well-qualified contracting firms or cooperatives of small contractors, who have the capacity to carry out the work on the required scales.
3. It is, therefore, requested that immediate action in this regard may please be taken and henceforth splitting of the works if at all should be resorted to with prior permission of this Ministry.

No. RW/NHIII/COORD/34/84

Dated the 14th November, 1984

CIRCULAR

Subject : Recommendations of the Vohra Committee regarding National Highways works costing less than Rs. 10 lakhs for which administrative approval is to be accorded-Clarification

In accordance with this Ministry's letter of even number dated the 24th March, 1984, the State Governments are required to prepare a detailed estimate in respect of works costing less than Rs. 10 lakhs and forward only the abstract estimate indicating the various quantities, rates and amounts to this Ministry for according Administrative Approval. The Administrative Approval is to be accorded subject to the condition that the State Chief Engineers concerned would accord technical sanction to the detailed estimate within 3 months of the date of according Administrative Approval and ensure commencement of work within another 6 months from the date of technical sanction, failing which Administrative Approval would automatically stand cancelled. Such works, in any Annual Programme coming under the delegated powers of the State shall be identified by the Projects Chief Engineers and intimated to the State. On receipt of the proposal from the State for according Administrative Approval, the concerned Branch shall put up these particulars to the concerned Project Executive Engineer who, keeping in view the Projects included in the Annual Programme, will examine the proposal broadly and pass it on to concerned Under Secretary for according Administrative Approval.

PS to DG (RD), ADG (R/ADG) (B), All Chief Engineers/Superintending Engineers/Executive Engineers/Assistant Executive Engineers, DS (P & B)/Under Secretaries/Desk Officers, All Sections in the Roads Wing.

No. RW/NHIII/COORD/34/84

Dated the 12th December, 1984

To

The Secretaries of all States
PWD (dealing with National Highways)

Subject : Recommendations of Vohra Committee regarding National Highway works costing less than Rs. 10 lakhs for which administrative approval is to be accorded

I am directed to refer to this Ministry's letter of even number dated the 24th March, 1984 requesting the State Governments to prepare a detailed estimates and forward only the abstract of estimate indicating various quantities, rates and amounts to this Ministry for according Administrative approval. While forwarding abstract of estimates, information as per details reproduced below is required to be furnished in terms of the provisions contained in the National Highways (Amendment) Rules 1976. (Circulated vide this Ministry's letter No. PL-30 (193)/71 dated the 15th October, 1976).

- (a) Proposal in brief with a rough plan of the area in which the work is to be executed;
- (b) Extent of preliminary survey and investigation done;
- (c) Broad features showing the existing position and the improvements desired;
- (d) Traffic data;
- (e) Duration of execution;
- (f) Phasing of expenditure and also physical performance;
- (g) Rough quantities and estimated cost under broad headings such as :

(1) <i>Road Works</i>	(2) <i>Bridge Works</i>
Land acquisition; earthwork; road material	Foundations, superstructure, guide bunds, etc.
- (h) Detailed specifications;
- (i) List of equipments required for speedy execution of the work;
- (j) Alignment plan and longitudinal section in case of roads; hydraulic data and outline designs of structure in case of bridges; and
- (k) Particulars for comparison of the similar works carried out in the same region.

2. Attention is also invited to the condition 10 of the Schedule of the N.H. Rules referred to above and reproduced below :

- (i) In case of the works where standards and designs adopted in the estimates are in accordance with the Indian Roads Congress Code and specifications and any other relevant instructions, guidelines, standard bridge designs etc. issued by the Central Government from time to time, copies of the sanctions accorded by the executive agency shall invariably be endorsed to the Regional Officers concerned of the Ministry in the Central Government dealing with National Highways alongwith complete copy of the estimate so that even after sanction, they could examine the matter and bring to the notice of executive agency deviations from such Codes, specifications, instructions, guidelines standard bridge designs, if any;
- (ii) Where for any work, deviations from approved standards, specifications, instructions, guidelines issued by the Central Government have to be made due to local conditions, no work shall be sanctioned by any executive agency unless a complete copy of the estimate is furnished to the Regional Officer concerned of the Ministry in the Central Government dealing with National Highways and his approval has been obtained in accordance with the general instructions issued by them from time to time governing the disposal of such cases. A brief mention of these deviations shall also be made by the executive agency in the abstract estimates to be sent to the Central Government quoting the reference of approval of the Regional Officer concerned;
- (iii) In all other cases where proposed deviations do not fit in with the general instructions issued by the Central Government or are not necessitated due to local conditions, technical and financial sanction thereto may be accorded by the executive agency with the prior approval of the Central Government on a reference being made in this behalf alongwith a copy of the detailed estimate through the Regional Officer of the Ministry of the Central Government dealing with the National Highways who shall forward the same to the Central Government with his comments thereon.

These provisions shall continue to be applicable.

3. I am accordingly to request that besides supplying the information mentioned in para 1, the procedure mentioned in the schedule to National Highways (Amendment) Rules 1976, referred to in para 2 above, may also be kept in view while according technical sanction.

122.1 RESOLUTION GOVERNING CENTRAL ROAD FUND

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
122.1.1	OR/MSD/26/75 dt. 27.6.77	Resolution governing the Central Road Fund	122.1/1

No. OR/MSC/26/75

Dated the 27th June, 1977

To

All State Govts. and Union Territories, (P.W.D.). (B&R) Secretaries

Subject : Resolution governing the Central Road Fund

I am directed to say that, as the State Govt/Local Administration may be aware, the question of continuance or otherwise of the Central Road Fund had been under the consideration of the Government of India for quite sometime past. Finally, it has been agreed to continue the Fund but the objectives of the Fund indicating the type of schemes which could be financed from the Central Road Fund Allocations Account and Central Road Fund (Ordinary) Reserve have been modified so as to give, comparatively higher emphasis to matters like research, training, investigations, studies, etc. which generally do not get adequate attention as part of the normal development schemes. The list of road/bridge works which could be financed from this source have also been somewhat modified so as to make it more specific, precise and broad-based.

2. The resolution with revised objectives and some other consequential changes was placed before the Parliament and a copy as passed by the two Houses of Parliament is enclosed. I am to request that in future while sending proposals to be financed out of the Central Road Fund, the revised objectives of the resolution may be kept in view and details of the schemes with justification given on the basis of the modified objectives.

Enclosure to letter No. OR/MSC/26/75. dt 27.6.77

ANNEXURE I

RESOLUTION GOVERNING THE CENTRAL ROAD FUND AS PASSED BY THE RAJYA SABHA ON THE 1ST APRIL 1976 AND ADOPTED BY THE LOK SABHA ON THE 18TH JUNE 1977.

"In supersession of the Resolution on Road Development adopted by the Constituent Assembly of India (Legislative) on the 19th November, 1947 and as subsequently amended by that Assembly on the 8th December, 1949 and by the Parliament of India on the 14th April, 1950, this House hereby resolves that —

1. There shall continue to be set apart an amount not less than 3.5 paise per litre out of the duty of customs and of excise levied on motor spirit and the proceeds thereof shall be applied for the purposes of road development.
2. (1) The proceeds of such an amount so set apart in any financial year, reduced by duty attributable to taxed motor spirit used in aviation during the same period, shall be credited as a block grant to a separate Road Fund to be maintained in the Public Account of India.
- (2) For the purpose of this Resolution taxed motor spirit shall mean motor spirit upon which the duty of customs or excise shall have been paid and in respect of which no rebate of such duty shall have been given.
3. (1) The Road Fund shall be allocated as follows :—
 - (a) A portion equal to twenty per cent shall be retained by the Central Government as a Central Reserve, this percentage being applicable with effect from the allocation due for the financial year 1948-49.
 - (b) Out of the remainder there shall be allocated by the Central Government a portion for expenditure in each State and Union Territory Specified in the First Schedule to the Constitution as near as may be in the ratio which the consumption of taxed motor spirit other than motor spirit used in aviation, in each area for which an allocation is to be made shall bear to the total consumption in the territory of India of taxed motor spirit, other than motor spirit used in aviation during the financial year concerned.
 - (2) The portions allocated for expenditure in the various States and Union Territories shall be retained by the Central Government until they are actually required for expenditure in the manner hereinafter specified.
 - (3) If in the opinion of the Central Government the Government/Administration of any State/Union Territory has at any time :
 - (a) Failed to take such steps as the Central Government may recommend for the regulation and control of motor vehicles within the State or Union Territory or
 - (b) Delayed without reasonable cause the application of any portion of the Road Fund allocated or re-allocated, as the case may be, for expenditure within the State or Union Territory the Central Government may resume the whole or part of any sums which it may at that time held for expenditure in that State or Union Territory.
 - (4) All sums resumed by the Central Government from the account of any State Government/Union Territory Administration as aforesaid shall be re-allocated between the credit accounts of State Government/Union Territory Administration and the reserve with the Central Government in the ratio of the main allocation for the financial year preceding the year in which the re-allocation is made.

Provided that the sums so calculated as the share of the State/Union Territory from whose account the resumption has been made shall be credited to the reserve with the Central Government.

- (5) Special additions to Road Fund for financing particular projects may be accepted from source other than mentioned in para 2(1) which shall be kept in a special reserve and utilised for such projects.
4. The balance to the credit of the Road Fund or of any allocation thereof shall not lapse at the end of the financial year.
 5. No expenditure shall be incurred from any portion of the Road Fund have as hereinafter provided.
 6. The Central Reserve with the Central Government shall be applied first to defraying the cost of the administering the Road Fund and thereafter the balance of Central Reserve and Central Road Fund (Allocation) shall be utilised for financing such of the schemes connected with roads as the Central Government may approve and the sums allocated for expenditure in the States/Union Territories from these sources may, subject to the previous approval of the Government of India to each proposal made, be expended upon any of the following objects, namely :—
 - (a) Road Research and Intelligence Schemes;
 - (b) Traffic Studies and Economic Surveys;
 - (c) Training arrangements for young Engineers;
 - (d) Schemes of all-India importance such as those leading to the removal of regional imbalance such as helping in the development of tribal areas, backward regions, promoting inter-State Communication facilities, helping in combating anti-social and criminal elements etc, promotion of tourism, agricultural marketing areas links etc., part contribution to programme for setting up drivers' conductor's and cleaners' road side resting places and passengers wayside facilities on State roads etc., road/bridge works required for National Projects like Atomic Power Stations, Industrial Undertakings etc., likely to be lost sight of the road authorities concerned in the midst of other activities.

Provided that the amounts in the Special Reserve shall be applied only to the purposes for which they are earmarked.

7. No expenditure shall be approved by the Government of India to be incurred from the Central Road Fund without the prior approval of the Union Minister of Shipping and Transport."

122.2 PROCEDURE

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
122.2.1	WII-21 (2)/50 dt. 13.6.50	Procedure for Adjustment of Expenditure against the Central Road Fund	122.2/1
122.2.2	WIII-36(5)/59 dt. 1.9.60	Procedure for Approving Estimates for Works Financed from C.R.F.	122.2/3
122.2.3	WIII-36(5)/59 dt. 1.9.60	Procedure for Approving Estimates for Works Financed from the Central Road Fund (O) Reserve	122.2/4
122.2.4	CRF-1(3)/72-OR dt. 26.9.72	Acceleration of the Execution of Road Development Works Financed from the Central Road Fund	122.2/5

No. WII-21(2)/50

Dated the 13th June, 1958

Subject : Procedure for adjustment of expenditure against the Central Road Fund

I am directed to invite a reference to the Central Road Fund Resolution, as recently amended by Parliament a copy of which was forwarded to you with this Ministry's letter No. WII-21(1)/50 dated the 11th May, 1950 (a fresh copy is attached for ready reference). Under this Resolution, Part B States have been placed, with regard to distributions from the Fund, on a par with Part A States and the new Chief Commissioner's States of Bhopal, Bilaspur, Himachal Pradesh, Kutch, Manipur, Tripura, and Vidhya Pradesh on a par with the older Chief Commissioner's States.

2. Orders have been issued by the Government of India from time to time relating to the procedure for payments from the Fund. As the Governments of Part B States and the new Chief Commissioner's States may not be aware of the details of this procedure, they are restated in the following paragraphs. It may be explained that the money lying in the Fund exists in three different forms, the Road Fund Allocations, the Central (Ordinary) Reserve, and the Central (Special) Reserve.

3. *Payments from Road Fund Allocations of States.*

- (1) Under para 7 of the Road Fund Resolution, the sums allocated for expenditure in the States can be spent only on the objects specified in that para and such expenditure requires the previous approval of the Central Government. Before approving a proposal for expenditure from the Road Fund Allocations of a State, the Central Government are required to refer it to the Standing Committee for Roads, vide para 9(4) of the Resolution. It will, therefore, be necessary for the State concerned to obtain the previous approval of the Central Government to schemes which they intend to finance wholly or partly from the State's Road Fund Allocations. They must do this before incurring any commitments on these schemes. They need not send the estimates to the Centre for approval of any works proposed to be financed from the Road Fund Allocations, though such estimates may be sent for technical advice to the Roads Organisation of the Ministry of Transport if the State wishes to do so.

To part
B States only.

- (2) Quarterly allotments will be made by the Central Government from the allocations held by them to the credit of the State Government concerned for expenditure on specific schemes which have been previously approved by the Central Government vide para 5 of this Ministry's letter No. B-1(5)/50, dated the 27th March, 1950 to the Government of all Part B States, and No. B-4(4)/50, dated the 19th May, 1950, to the Government of Bihar, Public Works Department (copy of the letter endorsed to you).

*Part B
States.
© To part C States.

- * (3) @ (2) Audit is required to see that the expenditure on any scheme met out of allocations from the Central Road Fund is within the programme approved by the Central Government with the advice of the Standing Committee for Roads. For this purpose, the Government of the State concerned, upon the receipt of the approval of the Central Government, should intimate to them the name, number, and date of the detailed estimate as (technically) sanctioned by the competent authority, the amount for which it is sanctioned, the amount to be met from the State's Road Fund Allocations, and a very brief description of the work which it comprises in those cases where the title of the estimate itself does not adequately convey its scope. This information will be passed on by the Government of India to Audit with instructions that expenditure against the estimate in question may be adjusted against the State's Road Fund Allocations to the extent authorised.
- * (4) @ (3) The Accountant General or Comptroller concerned is authorised to pass an excess over the estimated cost of a scheme as approved by the Central Government up to a limit of 10% of the estimated cost. When the excess is more than 10% the approval of the Central Government to the revised cost should be obtained by the State Government concerned. This limit of 10% applies to excesses over the amounts approved by the Government of India whether at

the preliminary stage when approval to schemes is accorded after obtaining the advice of the Standing Committee for Roads, or at the later stage when the final costs of works as per detailed estimates are intimated to Audit.

4. *Payments from the Road Fund Central (Ordinary) Reserve :*

- (1) Under para 6 of the Road Fund Resolution, the Central (Ordinary) Reserve with the Government of India can be applied only for the purposes specified in that para. Before approving a proposal for expenditure from the Central (Ordinary) Reserve, the Central Government are required to refer it to the Standing Committee for Roads, *vide* para 9 (4) of the Resolution.
- (2) When an application is received by the Government of India for a grant from the Central (Ordinary) Reserve, they will in the first instance satisfy themselves whether the proposed scheme is suitable and then refer it to the Standing Committee for roads. If, in the light of the advice tendered by the Committee, the Government of India decide that a grant should be given from the Reserve to the State Government or other Administration or authority concerned, the Government of India will inform them that they will be prepared to meet from the Reserve the whole or a stated percentage of the estimated cost of the work, subject to a maximum limit, if necessary.
- (3) The State Government or other administration or authority concerned should then submit detailed estimates with plans, etc. for each such schemes to the Government of India. After scrutiny of the estimates, the Government of India will communicate their technical approval and financial sanction to the State Government or other administration or authority concerned.
- (4) The competent authority will then accord (technical) sanction to the estimates, and the State Government or other administration or authority concerned should then intimate to the Government of India the number, date, and other particulars of the detailed estimates so sanctioned as in para 3(3)*/3(2)@ above. The Government of India will at once pass on this information to Audit and inform them that a contribution will be made from the Central (Ordinary) Reserve towards the expenditure against the sanction estimate to the extent decided upon.
- (5) Actual payments will be made by the Accountant General, Central Revenues, to the State Government or other administration concerned on the basis of the monthly audited expenditure on the work, as communicated to him by the State Accountant General; or Comptroller concerned *subject to the limit of the contribution sanctioned by the Government of India.*
- (6) Where the Accountant General Central Revenues, is also the Audit Officer for a Chief Commissioner's State, he will make the necessary adjustment himself in his books. *Subject to the limit of the contributions sanctioned by the Government of India.*
- (7) The State Accountant General, or Comptroller or the Accountant General, Central Revenues, as the case may be, is empowered to pass any excess over a contribution from the Central (Ordinary) Reserve sanctioned by the Government of India upto a limit of Rs. 1,000/- in any one case. When the excess is more than Rs. 1,000/- an application may be made by the State Government or other administration or authority concerned for an extra grant from the Central (Ordinary) Reserve. In making such an application, the revised (detailed) estimates, if any, for the work should also be submitted to the Government of India for technical approval and financial sanction.

with a report explaining in full the reasons for the excess.

- (8) Application if any, for extra grants from the Central (Ordinary) Reserve will be considered by the Government of India on the merits of each case in the light of the financial position of the Reserve and other circumstances prevailing at the time, but no assurance can be given that the extra grant required will be forthcoming. Therefore, while sanctioning a grant from the Central (Ordinary) Reserve initially the Government of India may require an assurance from the State Government or other administration or authority concerned that they will provide the balance of the funds that may be needed to complete the project from their own resources.
5. The procedure described in paragraphs 3 and 4 above has been in force for the provinces (now part A States) since the Road Fund was instituted 20 years ago. It is a simple procedure quickly understood by the Public Works Department of the States and has given no trouble in all these years.
6. *Payments from the Central Road Fund (Special) Reserve*
The special reserve is intended for expenditure on specified objects; *vide* paras 3 (5) and 9 (4) of the Resolution. The procedure for the sanction of grants and adjustments of expenditure from the Special Reserve is the same as what for grants from the Central (Ordinary) Reserve.
7. Strict instructions have been issued to Audit not to admit expenditure from any of the sub divisions of the Central Road Fund, i.e. the allocations, the Central (Ordinary) Reserve, and to the Central (Special) Reserve, unless it has been authorised by the Central Government under the prescribed procedure described above, if, for any special reasons, it is desired that expenditure should be permitted from the Fund in anticipation of sanction of the Central Government in accordance with the above described procedure, their orders should be obtained for this departure from the rules. Audit is *not* empowered to admit such expenditure from the fund and will not do so unless authorised specifically by the Central Government.

122.2.2

No.WIII - 36 (5)/59

Dated the 1st September, 1960

To

1. The Chief Secretary, Himachal Pradesh, Administration, Simla
2. The Chief Secretary, Manipur Administration, Imphal.
3. The Chief Secretary, Tripura Administration, Agartala.
4. The Chief Secretary, Andaman & Nicobar Islands Administration, Port Blair.
5. The Chief Secretary, Delhi.

Subject :- Procedure for approving estimates for works financed from the Central Road Fund

I am directed to refer to the Ministry of Home Affairs letter No.35/10/59-ACII dated the 3rd June, 1960, and to say that the powers to accord technical sanction to the estimates delegated therein, will in future apply also to the estimates for works which have been approved for being financed from the Central Road Fund. The estimates for works costing upto Rs 5 lakhs will be technically sanctioned by the Administration after they have been formally approved by this Ministry for being financed from the Central Road Fund. While submitting proposals of such works to be financed from the Central Road Fund, the following particulars are required to be furnished.

- i) An index map.
 - ii) Scope of scheme complete with specifications etc.
 - iii) Estimated cost.
 - iv) A comprehensive report on the utility of the scheme :—
2. After a proposal has been accepted by the Govt. of India for being financed from the Central Road

Fund, the Administration will accord administrative and technical sanction to the estimate and forward to this Ministry the particulars of the technical sanction accorded to the estimate. On receipt of such particulars, Audit will be authorised to admit expenditure to the stipulated extent debitable to the Central Road Fund.

3. The works estimated to cost Rs 5 lakhs or more will be technically and financially approved by this Ministry as heretofore.
4. This procedure will, however, not apply to experimental works undertaken for research and intelligence financed from the Central Road Fund as also to the works with which more than one Administration/State Government are concerned. The detailed estimates for such works will continue to be submitted to the Government of India for their prior approval.
5. Since the Government of India attach considerable importance to works financed from the Central Road Fund, monthly progress reports in the prescribed form and completion reports on the works sanctioned by the Administration are, however, required to be submitted to the Consulting Engineer (Road Development) as before.
6. I am to add that the amount from the Central Road Fund for individual works, once made, will not be revised.

122.2.3

No. WIII-36 (5)/59

Dated the 1st Sept., 1960

To

All State Governments

Subject : Procedure for approving estimates for works financed from the Central Road Fund (Ordinary) Reserve.

I am directed to invite reference to this Ministry's letter/endorsement No. WIII-36 (5)/59 dated the 15th September, 1959, and to say that it has been decided that the procedure for approving the works mentioned in para 8 of the Planning Commission's letter No. Plan/5/2/57 dated the 12th May 1958, to all the States Governments, will also apply to the works which are financed from the Central Road Fund (Ordinary) Reserve. In brief, the Works which are estimated to cost Rs 25 lakhs or more during the plan period or Rs 10 lakhs during particular year will be technically approved and financially sanctioned by this Ministry according to the practice in force in the past. But other works which cost less than these amounts and which the State Government desire to be aided from the Central Road Fund (Ordinary) Reserve will be approved by the Government of India on receipt of a formal proposal, giving the following details :—

- (1) An index map.
- (2) Scope of the scheme complete with specifications etc.
- (3) Estimated cost based on a preliminary estimate.
- (4) A comprehensive report on the utility of the scheme.

After the proposal has been *accepted* by the Government of India, the State Government will sanction the detailed estimate technically and send a certificate to the effect that the scheme has been *accepted* for financial sanction by the State Finance Department. The Government of India will therefore intimate to the Audit that debit of the stipulated extent may be accepted against the Central Road Fund (Ordinary) Reserve.

2. This procedure will, however, not apply to such works as are experimental works undertaken for research and are financed from the Central Road Fund (Ordinary) Reserve as also to works with which are more than one State are concerned. The detailed estimates for such works will continue to be submitted to the Government of India for their prior approval.
3. The particulars of the technical sanction issued by the State Government together with a statement to the effect that the schemes have been accepted for financial sanction by the State Finance Department may be sent to the Government of India for communication to audit to permit them to adjust the expenditure.
4. Since the works aided from the Central Road Fund (Ordinary) Reserve are of special nature, it is not proposed to make any change in the system of getting progress reports. Monthly progress reports in

the prescribed form and completion reports on the works sanctioned by the State Government, will therefore, continue to be sent to the Consulting Engineer (Road Development) as before.

5. I am to add that the grants from the Central Road Fund (Ordinary) Reserve for individual works, once made, will not be revised/increased beyond the amount already agreed to by this Ministry and excesses if any, will be met by the State Government from their own resources.

122.2.4

No.CRF -I (3)/72-OR

Dated the 26th Sept., 1972

To

State Governments/Administrations of:

Andhra Pradesh/Assam/Bihar/Gujarat/Haryana/Himachal Pradesh/Jammu and Kashmir/
Kerala/Madhya Pradesh/Maharashtra/Manipur/Meghalaya/Mysore/Nagaland/Orissa/Punjab/
Rajasthan/Tamil Nadu/Tripura/Uttar Pradesh/West Bengal/Andman & Nicobar/
Chandigarh/Delhi/Goa, Daman and Diu/Pondicherry (Departments dealing with Roads)

Subject: Acceleration of the execution of road development works financed from the Central Road Fund.

I am directed to say that as the State Governments/Administrations of Union Territories are aware, the Central Road Fund has been in existence since the 1st March 1929 and is currently governed by a Resolution adopted by the Constituent Assembly of India (Legislative) on the 19th November 1947, as amended by that Assembly on the 8th December, 1949 and by Parliament on the 14th April 1950. A copy of the amended Resolution is attached. For the sake of facility, the procedure in regard to Central Road Fund is reiterated in paras 2 to 7 below.

CENTRAL ROAD
FUND (ORDINARY)
RESERVE AND
CENTRAL ROAD
FUND ALLOCATIONS

2. Under the Resolution, a sum as near as may be equivalent to the share in the annual proceeds from taxed motor spirit used in aviation during the calendar year ending during the financial year concerned was to be deducted and set apart for grants-in-aid by the Central Government for Civil Aviation and the balance credited to the Central Road Fund. Upto 1934, 10% of the annual revenue thereafter 15% upto 1947-48, and from 1948-49 20% of the annual revenue of the Central Road Fund was creditable to the Central Reserve, called the Central Road Fund (Ordinary) Reserve. The balance in the Fund was to be allocated by the Central Government to the provincial or State Governments and Local Administrations on the basis of the ratio of consumption of taxed non-aviation motor spirit during the calendar year ending during the financial year concerned.

CENTRAL ROAD
FUND (SPECIAL)
RESERVE.

3. There is a third sub-division of the Central Road Fund called the Central Road Fund (Special) Reserve. This is intended to accommodate contributions received from sources other than the extra duty on non-aviation motor spirit for financing particular schemes in which any other Ministry or Department may be interested.

PROGRAMMES ARE
CALLED FOR
A PLAN PERIOD

4. Programmes of road development works to be financed from the Central Road Fund are called for from the different States/Administrations of every Plan period. For this purpose the anticipated revenue available during a period of five years is worked out and the States/Administrations are asked to send the programmes to the Government of India for their approval. *No work can be financed from the Central Road Fund without OBTAINING THE PRIOR APPROVAL OF THE GOVERNMENT OF INDIA*

PROCEDURE FOR
ADJUSTMENT OF
EXPENDITURES
FROM THE CENTRAL
ROAD FUND.

5. The procedure for adjustment of expenditure against the Central Road Fund is given in this Ministry's letter No. WII-21 (2)/50, dated the 13th June 1950. Prior to 1960-61 the expenditure incurred by States from the Central Road Fund was not voted by the Central Legislature. As this left a gap in Parliamentary control, it was decided that the entire expenditure from the Fund should be voted by Parliament. Since then, payments to States are being restricted to the amount of the Provision accepted for inclusion in the budget. According to the present practice a lumpsum provision is made in the Central Budget under *Grants-in-aid*.

**POWERS DELEGATED
TO STATE GOVERN-
MENTS AND UNION
TERRITORIES.**

6. (a) *Central Road Fund (Ordinary) Reserve :*

According to the Ministry's letter No. WIII-36(5)/59, dated the 1st September 1960 the works of the State Govts. financed from the Central Road Fund (Ordinary) Reserve which are estimated to cost Rs 25 lakhs or more during the Plan period or Rs. 10 lakhs during any particular year will be technically approved and financially sanctioned by this Ministry. But other works which cost less than these amounts and which the State Government desire to be aided from the Central Road Fund (Ordinary) Reserve will be approved by the Government of India on receipt of a formal proposal. After the proposal has been accepted by the Government of India, the State Government will sanction the detailed estimate technically and send a certificate to the effect that the scheme has been accepted for financial sanction by State Finance Department. The State Government should send the particulars of technically sanctioned estimate for the work, along with the certificate, for communication to Audit. This procedure does not, however, apply to such works as are experimental works undertaken for research and are financed from the Central Road Fund (Ordinary) Reserve as also the works with which more than one State are concerned. The detailed estimates for such works will continue to be submitted to the Government of India for their prior approval.

In the case of Union Territories, the powers were delegated in this Ministry's letter No. WIII-36(5)/59 dated the 1st September 1960 according to which the works financed from the Central Road Fund (Ordinary) Reserve which are estimated to cost upto Rs 5 lakhs will be technically sanctioned by the Administration *after they have formally been approved by the Government of India*. Subsequently, certain powers in this respect were delegated to the Administrations under the Delegation of Financial Powers Rules, 1958. In the case of works financed from the Central Road Fund (Ordinary) Reserve which the Administrations are empowered to accord technical sanction, the prior approval of the Government of India is to be obtained and the amount from the Central Road Fund (Ordinary) Reserve is to be restricted to the one agreed to by the Government of India. Thereafter the particulars of technically sanctioned estimate for each approved work are to be sent to the Government of India for communication to Audit. The estimates, costing more than the amount prescribed under the delegated powers, are to be forwarded to the Government of India for technical approval and financial sanction.

(b) *Central Road Fund (Allocations) :*

Once the programme of road development works to be financed from the Central Road Fund (Allocations) is approved by the Government of India, the Competent authority of the State/ Administration can accord technical sanction to the estimate for work irrespective of the cost involved. *The cost should, however, be within the amount approved by the Government of India*. The particulars of technically sanctioned estimate of the works are to be forwarded to the Government of India for communication to Audit.

**AUDIT CANNOT
ADMIT EXPENDITURE
AGAINST C.R.F.
UNLESS SPECIFI-
CALLY AUTHORISED
BY THE GOVT. OF
INDIA**

7. Audit are not empowered to admit expenditure against the works financed from the Central Road Fund (both Reserve and Allocations) when they are initially approved by the Government of India but they are specifically authorised by the Government of India to do so after receiving the particulars of technically sanctioned estimates from the States/ Administrations. *It is, therefore, imperative that the requisite particulars are sent by the States/Administrations as soon as the detailed estimates of approved works are technically sanctioned by the competent authority of the State/ Administration.*

8. Cases have come to the notice of the Government of India where there has been inordinate delay in the execution of works financed from the Central Road Fund resulting in revision of costs from time to time. The State Government/Administrations of Union Territories will appreciate that both the delay in the completion of the works and the undue increase in the costs are matters for serious consideration and concern. On the one hand the provision of the required facility to the public is abnormally delayed and on the other, the increase in costs over the estimated costs unnecessarily limits the scope of taking up many new works with the available funds.
9. In the case of works financed from the Central Road Fund (Ordinary) Reserve and Central Road Fund (Special) Reserve, the States are required to send to this Ministry quarterly progress reports, and to send the completion reports or certificates, duly verified by Audit, as soon as the works are completed. These are not being received in several cases with the result that the Government of India are not aware of the stage of progress or completion at a given time. In so far as works financed from the Central Road Fund (Allocations) are concerned progress reports are required to be forwarded to the Government of India but the States/Administrations are required to furnish the following information as soon as a work is completed vide this Ministry's circular letter No. CRF-10(4)/70-LR dated the 30th April, 1971 :
 - (a) Date of completion of the work.
 - (b) Final completion cost.
10. Cases have also come to the notice where the particulars of technically sanctioned estimates of road development works approved by the Government of India have not been forwarded by the States/Administrations to the Government of India for communication to Audit and expenditure is being incurred on such works. In such type of cases, Audit are not empowered to admit any expenditure against the works unless they have specifically been authorised by the Government of India to do so on receipt of the requisite particulars from the States/Administrations. It is, therefore, very essential that such particulars are forwarded to the Government of India as early as possible. *The particulars may always be forwarded in the prescribed form (Annexure I).*
11. In certain cases, no expenditure has been reported on road development works financed from the Central Road Fund which were approved long ago. In this connection, it may be pointed out that para 83 of the Central Public Works Department Code provides that approval or sanction to an estimate for any public works, other than annual repairs, will, unless such work has been commended, cease to operate after a period of five years from the date on which it was accorded. The sanction or approval to such type of works will, therefore, automatically cease to operate if no expenditure has been incurred thereon for a period of five years from the date of their sanction or approval. The States/Administrations may kindly note this codal requirement. Whenever such type of works come to the notice of the Govt. of India, those works will be treated as cancelled. In cases where a period of five years has not elapsed from the date of approval of road development works not so far commenced for execution and where the particulars of technically sanctioned estimates have not been forwarded to the Government of India, the particulars may be forwarded immediately in the prescribed form (Annexure I) and the works commenced for execution after Audit have been authorised by the Govt. of India to admit expenditure from the Central Road Fund.
12. In order to ensure that the States/ Administrations fulfil the requirements of paras. 8 to 11 above, it has been decided to obtain from them quarterly statements (Annexure II) separately for each type of works, viz. Central Road Fund (Ordinary) Reserve Central Road Fund (Special) Reserve and

Central Road Fund (Allocations). The statements should relate to the quarters ending the 31st March, 30th June, 30th September and 31st December each year and should *positively* reach this Ministry not later than one month from the date of ending of each quarter.

The statements for the quarter ending the 30th September 1972 which should take into account the reviewed position of all approved works that may have been approved by the Government of India for the State/ Administration from the inception of the scheme may be forwarded so as to reach this Ministry by the 31st October 1972 at the latest. The statements should include the following-type of works :—

- (1) Works which have been completed but the completion reports in regard to which have not been forwarded to the Govt. of India.
- (2) Works in progress.
- (3) Works which have been approved by the Govt. of India but which have not been taken up for execution.

(This does not at present relate to Nagaland, Goa Daman and Diu and Pondicherry as no works have so far been approved for being financed from the Central Road Fund. It will, however, be necessary to forward the statements to the Government of India after works have been approved for being financed from the Central Road Fund).

ANNEXURE I

STATEMENT SHOWING THE PARTICULARS OF TECHNICALLY SANCTIONED ESTIMATE IN RESPECT OF WORK FINANCED FROM THE CENTRAL ROAD FUND.

1. No. and date of Govt. of India's letter in which the scheme was approved.
2. Job No./Approval No., if any, allotted to the work by the Govt. of India.
3. Total estimated cost of the work as approved by the Govt. of India.
4. Name of the work as technically sanctioned by the competent authority.
5. Total estimated cost as technically sanctioned.
6. No., date and designation of the authority according technical sanction to the estimate.
7. Excess in the estimate.
8. Percentage of excess.
9. Reasons for the excess over 10 per cent.
10. Provision, if any, for additional temporary establishment and Tools & Plants.
11. Amount debitable to :—
 - (a) Central Road Fund (Ordinary) Reserve.
 - (b) Central Road Fund (Allocations)
 - (c) State funds.
12. Remarks.

Signature _____
Designation _____

ANNEXURE II

WORK-WISE STATEMENT OF WORKS APPROVED BY THE GOVT. OF INDIA FOR BEING FINANCED FROM THE CENTRAL ROAD FUND (ORDINARY) RESERVE/CENTRAL ROAD FUND (SPECIAL) RESERVE/CENTRAL ROAD FUND (ALLOCATIONS) FOR THE QUARTER ENDING

Sl.No	Name of work	Approval No. or Job No. allotted by the Govt. of India	Date of approval by the Govt. of India	Total cost as approved by the Govt. of India	Total expenditure till the end of the quarter.	Whether particulars of technically sanctioned estimate forwarded to Govt. of India for Communication to Audit, if so letter No. & date with which sent.	If work is completed :		Remarks
							Final completion cost as accepted by Audit.	Date of completion.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.

123 ROADS OF INTER-STATE OR ECONOMIC IMPORTANCE

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
123.1	PL-30 (141)/69 dt. 19.7.71.	Procedure for Sanction to Detailed Plans and Estimates in Respect of Road/Bridge Projects Forming Part of the Central Aid Programme of State Roads of Inter-State or Economic Importance	123/1
123.2	B-22 (4)/77 dt. 19.9.77	Centrally Sponsored Schemes—Central Assistance for—Procedure of Release of Funds Changed—Regarding	123/4
123.3	OR/Misc/26/77 dt. 17.5.78	Central Aid Programme of State Roads of Inter-State or Economic Importance — Proforma for Submission of Particulars of Sanctioned Estimates	123/5
123.4	RW/PL-10 (4)/80 dt. 22.1.80	Central Loan Assistance for State Roads of Inter-State or Economic Importance	123/6
123.5	RW/PL-10(6)/81 dt. 8.7.82	Central Loan Assistance for State Roads of Inter-State or Economic Importance in the Sixth Five Year Plan	123/6

No. PL-30(141)/69

Dated the 19th July, 1971

To

All State Governments
(Departments dealing with Roads)

Subject : Procedure for sanction to detailed plans and estimates in respect of road/bridge projects forming part of the Central Aid Programme of State Roads of Inter-State or Economic Importance.

I am directed to invite a reference to this Ministry's letter No. PL-10 (167)/70, dated the 22nd January 1971 forwarding a list of road/bridge projects pertaining to your State selected by the Government of India for loan assistance under the Central Aid Programme of State Roads of Inter-State or economic importance in the 4th Five-Year Plan. Consequent upon the change in the pattern of assistance for these projects from grants-in-aid to 100% loan, the Government of India have reviewed the procedure for the scrutiny of detailed plans and estimates in respect of these projects and, as a result, a revised procedure has been evolved for preparation, scrutiny and sanction of detailed plans and estimates for approved projects accepted for loan assistance under the Central Aid Programme referred to above. The scope of the projects to be so sanctioned by the State Governments under delegated powers should be on the basis of details furnished by them to the Government of India for their approval at the time of the initial consideration of the proposals and accepted by this Ministry. In the event of such details not being available at the time of initial approval of individual projects, it will be necessary for the State Governments to furnish the same and obtain prior approval of the Government of India before sanctioning the detailed plans and estimates for projects falling within the delegated powers. Subject to this position, I am to convey that in supersession of all the orders issued from time to time so far on the subject, the following revised procedure may be adopted :

- (a) The State Governments shall themselves be competent to accord sanction to detailed plans and estimates for a road/bridge project estimated to cost Rs 1 crore or less. In respect of projects so sanctioned, necessary authorisation to Audit for admitting expenditure upto the specified Central loan assistance shall be issued by the Government of India in this Ministry on receipt of a statement indicating that the project has been accepted for financial sanction by the State Finance Department. In the absence of such an authorisation, no expenditure shall be booked by the Accountant General concerned against the approved Central loan assistance;
 - (b) Central liability in respect of sanctions to be accorded by the State Governments within the delegated sphere (Rs 1 crore) would in no case exceed the approved Central loan assistance and excess, if any, over and above the estimated cost indicated by the State Government at the time of the initial approval of the scheme will have to be met by the State Government from their own resources. A certificate to this effect would be essential before audit could be authorised to admit expenditure against the approved Central loan assistance;
 - (c) In the case of projects costing more than Rs 1 crore, prior technical approval and financial sanction of the Government of India in respect of detailed plans and estimates would be necessary before entering into financial liability on behalf of the Government of India. Necessary detailed plans and estimates for projects falling under this category will, therefore, continue to be submitted to this Ministry for their technical approval and financial sanction as per the current practice.
 - (d) For purposes of exercising the increased delegation of powers referred to at (a) above, it would *not* be permissible to sub-divide a major project into sub-sections so as to bring them within the purview of delegated powers.
 - (e) The broad specifications and standards for individual projects based on the Indian Roads Congress specifications and standards for the appropriate categories of roads (State Highways, Major District Roads, etc.) and bridges, as may be laid down by the Roads Wing, shall be followed by the State Public Works Departments for preparation, sanction and execution of projects irrespective of the fact whether a project is to be sanctioned by the State Government or the Government of India.
2. The revised procedure indicated at (a) to (e) will apply to new schemes approved in this Ministry's letter referred to in para (1) above yet to be commenced as well as to works already approved in the past, where necessary.
 3. The terms and conditions for the loan will be as under :—
 - (i) The loan amounts will be re-payable in a period of 15 years, re-payments being made in 15 equal instalments together with interest on the outstanding balance commencing from the following year. The amounts annually payable (by way of principal and interest) would be recovered in four equal instalments on the 1st of July, October, January and March each year.
 - (ii) The loan will carry interest @ 5% (five per cent) per annum provided that if the principal and/or interest are paid punctually on the due dates, the rate of interest will be reduced to 4¼% (four and three-quarter per cent) per annum.
 - (iii) The amount of the loan sanctioned would have to be adjusted against the Ways and Means Advances made to the State Government against approved loan schemes of this category as part of the Centrally-Sponsored Plan schemes during the year and the balance, if any, paid in cash to the State Government by the State Accountant General concerned.

4. I am to add that the following progress reports will continue to be submitted to this Ministry by the State Chief Engineer for all projects whether they have been sanctioned by the State Government within the delegated sphere or by the Government of India :

- (i) Quarterly progress Report in the prescribed form (copy enclosed — Annexure I and II); and
- (ii) Monthly Expenditure Report in the prescribed form — Copy enclosed — Annexure III).

5. I am to request that the revised procedure explained above may kindly be brought to the notice of all concerned and immediate action taken to go ahead with the approved projects on the lines indicated above. A copy of these instructions is also being forwarded to all the State Accountant Generals .

To West Bengal,
Bihar & U.P. only

6. I am to add that the revised procedure indicated above will not apply to non-plan loan projects like the Second Hooghly Bridge in Calcutta the Ganga Bridge near Patna Ganga Bridges in U.P. Consequently, the State Government will be competent *inter alia* to sanction detailed plans and estimates for these projects wholly themselves.

ANNEXURE I

ROAD DEVELOPMENT (Road Works)

Progress Report for the Quarter ending _____ State _____

P.W.D. Circle _____

P.W.D. Division _____

Name of work : _____

Highway No : _____ Date of sanction of estimate _____

Job Number : _____ Amount Rs _____

Section — Length _____ km _____ Date of commencement _____

Place — From _____ To _____ Target date of completion _____

Mileage/Kilometerage — From _____ To _____

PHYSICAL PROGRESS

Sl. No.	Item of work	Total quantity as per detailed estimate	Progress at the end of the previous quarter		Cumulative progress upto the end of the quarter under report		Expected date of completion	REMARKS
			Target %	Actual %	Target %	Actual %		
1.	2.	3.	4.	5.	6.	7.	8.	9.

1. Land acquisition (Areas)
2. Earthwork (Lac. cft)
3. Sub-base (Lac. cft)
4. Soling
 - (a) Collection (Lac. cft)
 - (b) Laying (Lac. cft)
5. Metalling
 - (i) Collection (Lac. cft)
 - (ii) Laying (Lac. cft)
6. Bitumen Macadam
 - (a) Collection
 - (i) Stone aggregate (Lac. cft)
 - (ii) Bitumen (M.T.)
 - (b) Laying (Lac. cft)
7. Premix carpet/surface dressing
 - (a) Collection
 - (i) Stone chips (Lac. cft)
 - (ii) Bitumen (M.T.)
 - (iii) Laying (Lac. cft)
8. Culverts (Rft)
9. Retaining walls (Rft)
10. Overall progress percentage
11. Expenditure (in Rs lakhs)
12. Additional information :
 - (a) Bottlenecks, if any, and action taken towards overcoming them.
 - (b) General brief description and remarks :
 - (i) Progress is generally satisfactory/fair/poor.

No. PL-30(141)/69

Dated the 19th July, 1971

To

All State Governments
(Departments dealing with Roads)

Subject : Procedure for sanction to detailed plans and estimates in respect of road/bridge projects forming part of the Central Aid Programme of State Roads of Inter-State or Economic Importance.

I am directed to invite a reference to this Ministry's letter No. PL-10 (167)/70, dated the 22nd January 1971 forwarding a list of road/bridge projects pertaining to your State selected by the Government of India for loan assistance under the Central Aid Programme of State Roads of Inter-State or economic importance in the 4th Five-Year Plan. Consequent upon the change in the pattern of assistance for these projects from grants-in-aid to 100% loan, the Government of India have reviewed the procedure for the scrutiny of detailed plans and estimates in respect of these projects and, as a result, a revised procedure has been evolved for preparation, scrutiny and sanction of detailed plans and estimates for approved projects accepted for loan assistance under the Central Aid Programme referred to above. The scope of the projects to be so sanctioned by the State Governments under delegated powers should be on the basis of details furnished by them to the Government of India for their approval at the time of the initial consideration of the proposals and accepted by this Ministry. In the event of such details not being available at the time of initial approval of individual projects, it will be necessary for the State Governments to furnish the same and obtain prior approval of the Government of India before sanctioning the detailed plans and estimates for projects falling within the delegated powers. Subject to this position, I am to convey that in supersession of all the orders issued from time to time so far on the subject, the following revised procedure may be adopted :

- (a) The State Governments shall themselves be competent to accord sanction to detailed plans and estimates for a road/bridge project estimated to cost Rs 1 crore or less. In respect of projects so sanctioned, necessary authorisation to Audit for admitting expenditure upto the specified Central loan assistance shall be issued by the Government of India in this Ministry on receipt of a statement indicating that the project has been accepted for financial sanction by the State Finance Department. In the absence of such an authorisation, no expenditure shall be booked by the Accountant General concerned against the approved Central loan assistance;
 - (b) Central liability in respect of sanctions to be accorded by the State Governments within the delegated sphere (Rs 1 crore) would in no case exceed the approved Central loan assistance and excess, if any, over and above the estimated cost indicated by the State Government at the time of the initial approval of the scheme will have to be met by the State Government from their own resources. A certificate to this effect would be essential before audit could be authorised to admit expenditure against the approved Central loan assistance;
 - (c) In the case of projects costing more than Rs 1 crore, prior technical approval and financial sanction of the Government of India in respect of detailed plans and estimates would be necessary before entering into financial liability on behalf of the Government of India. Necessary detailed plans and estimates for projects falling under this category will, therefore, continue to be submitted to this Ministry for their technical approval and financial sanction as per the current practice.
 - (d) For purposes of exercising the increased delegation of powers referred to at (a) above, it would *not* be permissible to sub-divide a major project into sub-sections so as to bring them within the purview of delegated powers.
 - (e) The broad specifications and standards for individual projects based on the Indian Roads Congress specifications and standards for the appropriate categories of roads (State Highways, Major District Roads, etc.) and bridges, as may be laid down by the Roads Wing, shall be followed by the State Public Works Departments for preparation, sanction and execution of projects irrespective of the fact whether a project is to be sanctioned by the State Government or the Government of India.
2. The revised procedure indicated at (a) to (e) will apply to new schemes approved in this Ministry's letter referred to in para (1) above yet to be commenced as well as to works already approved in the past, where necessary.
 3. The terms and conditions for the loan will be as under :—
 - (i) The loan amounts will be re-payable in a period of 15 years, re-payments being made in 15 equal instalments together with interest on the outstanding balance commencing from the following year. The amounts annually payable (by way of principal and interest) would be recovered in four equal instalments on the 1st of July, October, January and March each year.
 - (ii) The loan will carry interest @ 5% (five per cent) per annum provided that if the principal and/or interest are paid punctually on the due dates, the rate of interest will be reduced to 4¾% (four and three-quarter per cent) per annum.
 - (iii) The amount of the loan sanctioned would have to be adjusted against the Ways and Means Advances made to the State Government against approved loan schemes of this category as part of the Centrally-Sponsored Plan schemes during the year and the balance, if any, paid in cash to the State Government by the State Accountant General concerned.

4. I am to add that the following progress reports will continue to be submitted to this Ministry by the State Chief Engineer for all projects whether they have been sanctioned by the State Government within the delegated sphere or by the Government of India :

- (i) Quarterly progress Report in the prescribed form (copy enclosed — Annexure I and II); and
- (ii) Monthly Expenditure Report in the prescribed form — Copy enclosed — Annexure III).

5. I am to request that the revised procedure explained above may kindly be brought to the notice of all concerned and immediate action taken to go ahead with the approved projects on the lines indicated above. A copy of these instructions is also being forwarded to all the State Accountant Generals .

To West Bengal,
Bihar & U.P. only

6. I am to add that the revised procedure indicated above will not apply to non-plan loan projects like the Second Hooghly Bridge in Calcutta the Ganga Bridge near Patna Ganga Bridges in U.P. Consequently, the State Government will be competent *inter alia* to sanction detailed plans and estimates for these projects wholly themselves.

ANNEXURE I

ROAD DEVELOPMENT
(Road Works)

Progress Report for the Quarter ending _____ State _____

P.W.D. Circle _____
P.W.D. Division. _____
Name of work : _____
Highway No : _____ Date of sanction of estimate _____
Job Number : _____ Amount Rs _____
Section — Length _____ km _____ Date of commencement _____
Place — From _____ To _____ Target date of completion _____
Mileage/Kilometrage — From _____ To _____

PHYSICAL PROGRESS

Sl. No.	Item of work	Total quantity as per detailed estimate	Progress at the end of the previous quarter		Cumulative progress upto the end of the quarter under report		Expected date of completion	REMARKS
			Target %	Actual %	Target %	Actual %		
1.	2.	3.	4.	5.	6.	7.	8.	9.

1. Land acquisition (Areas)
2. Earthwork (Lac. cft)
3. Sub-base (Lac. cft)
4. Soling
 - (a) Collection (Lac. cft)
 - (b) Laying (Lac. cft)
5. Metalling
 - (i) Collection (Lac. cft)
 - (ii) Laying (Lac. cft)
6. Bitumen Macadam
 - (a) Collection
 - (i) Stone aggregate (Lac. cft)
 - (ii) Bitumen (M.T.)
 - (b) Laying (Lac. cft)
7. Premix carpet/surface dressing
 - (a) Collection
 - (i) Stone chips (Lac. cft)
 - (ii) Bitumen (M.T.)
 - (iii) Laying (Lac. cft)
8. Culverts (Rft)
9. Retaining walls (Rft)
10. Overall progress percentage
11. Expenditure (in Rs lakhs)
12. Additional information :
 - (a) Bottlenecks, if any, and action taken towards overcoming them.
 - (b) General brief description and remarks :
 - (i) Progress is generally satisfactory/fair/poor.

- (ii) Plant and machinery are adequate/inadequate, there being a need for additional _____
 (iii) Labour is adequate/inadequate — the reason being _____
 (iv) Resources (Stores) are adequate/inadequate, there being a shortage
 of _____ because of _____ (see bottlenecks)
 (c) Liabilities incurred and not otherwise shown in this form (money value to be shown)

Note : With the first quarterly report a statement showing sub-headwise quarterly percentage targets of progress for the entire expected period of completion shall also be submitted, which shall serve for reference in case of subsequent returns.

ANNEXURE II

QUARTERLY PROGRESS REPORT FOR BRIDGE WORKS UNDER E & I SCHEME FOR THE QUARTER ENDING

1. State
2. Name of Bridge
3. Location of Bridge
4. Length of Bridge
5. Job No
6. Cost as per sanctioned estimate
7. Date of commencement
8. Target date of completion of the bridge
9. Name of Contractor

10. Itemwise progress

S.No.	Item of work	Total to be done with unit	Quarterly target	Progress upto last quarter	Progress during the quarter	Progress upto end of the quarter	Progress of total
1.	FOUNDATIONS						
	(A) Well Foundations						
	(a) Curbs						
	(b) Sinking						
	(c) Well cap						
	(B) Open Foundations						
2.	SUB-STRUCTURE						
	(a) Piers						
	(b) Abutments						
	(c) Return walls						
3.	SUPERSTRUCTURE						
	(a) Casting girders						
	(b) Launching of girders						
	(c) Bearing						
	(d) Decking						
	(e) Wearing course and finishing						
4.	PROTECTIVE WORKS						
	(a) Left bank						
	(b) Right bank						
11.	Overall physical progress (as %age of the whole work)						
12.	Expenditure :—						
	(a) upto last quarter						
	(b) during the quarter						
	(c) total upto end of the quarter.						

Signature of Executive Engineer
 _____ Division.

Dated _____

Report No. _____

To

The Director General (Road Development),
 Ministry of Shipping & Transport (Roads Wing),
 Transport Bhavan, No. 1, Parliament Street, New Delhi.

Copy to : _____

STATEMENT OF EXPENDITURE ON ECONOMIC AND INTER-STATE IMPORTANCE SCHEME WORKS.

STATE :

MONTH :

Head of Account to which the
expenditure is debitable :

"LOAN SCHEMES"

Name of the project	Job No.	Amount of Central loan approved for the work	Progressive total of loan released upto end of the previous financial year	Total expen- diture incurred against the work upto the end of previous financial year	Expenditure from 1st April of the year under report to the end of the previous month	Expenditure during the month to which the return relates	Total of Columns 5, 6 and 7	REMARKS (The State Govt. may add here any remarks they may wish to offer on the progress of expenditure).
1.	2.	3.	4.	5.	6.	7.	8.	9.

123.2

No.B-22 (4)/77

Dated the 19th September, 1977

To

- (1) All Secretaries of State PWDs except, Assam and Meghalaya and Tripura (dealing with roads)
- (2) All Secretaries of Finance Departments of States except Assam, Meghalaya and Tripura.

Subject : Centrally sponsored schemes — Central assistance for — Procedure of release of funds changed — reg.

As the State Governments are aware, till 31st March, 1977, the Ministry of Finance (Plan Finance Divn.) were releasing funds by way of "Ways and Means Advances" towards Centrally sponsored schemes for the period April-November and thereafter regular payment sanctions were required to be issued by the administrative Ministries on the basis of the progress of expenditure. Under that procedure, the Ways and Means Advances so released were first adjusted against the payments due under the regular sanctions and the balance, if any, remaining after such adjustments were paid in cash to the State Govts. The adjustments against Ways and Means Advances were being done by the State AGs concerned.

* Applicable to
West Bengal only

2. Consequent, however, upon the departmentalisation of accounts, each Ministry has been made responsible for the release of funds to the State Govts. through the Ministry's Principal Accounts Officers for Centrally Sponsored Schemes. Accordingly, this Ministry proposes to adopt the following procedure for release of funds for Centrally Sponsored Schemes administered by it, viz. Centrally Aided State roads of inter-State or economic importance and the *Second Hoogly Bridge :—
 - (a) The funds would be released in quarterly instalments-April-June, July-September, October-December and January-March quarters ;
 - (b) While the first instalment would be released on the basis of estimated expenditure to be communicated by the State Govt. in the preceding month, the second, third and fourth instalments would be released on the basis of the progressive actual expenditure during the preceding quarter (s) and that anticipated for next quarter subject of course, to the maximum of the amount earmarked for a state from within the total available budget allocations.
 - (c) In all these cases however, the overall availability of budget provision will be the primary determining factor for allocations and the quarterly payments would have to be regulated on the basis of that provision which would be intimated to the State Govt. as soon as the budget is passed in the Parliament. The expenditure by the State Govts concerned would therefore have to be confined to the Central budget provision alone.

So far as the current year is concerned, funds for the period April-July have already been released and the balance amount shall be released in two further instalments for the periods August-December, 1977 and January-March, 1978. I am therefore to request that the actual expenditure incurred during April-July and the funds required during August-November quarter may kindly be intimated giving workwise details. The information should contain the following details :—

- (i) Name of the work
- (ii) Loan assistance approved by Govt. of India
- (iii) Cost of the project as sanctioned by the authority concerned
- (iv) Central share of the cost
- (v) Progressive expenditure upto previous quarter against the Central share
- (vi) Balance amount required to be paid by the Central Government
- (vii) Amount required during August, 1977 December, 1977 period supported by full details.

123.3

No. OR/Misc/26/77

Dated 17th May, 1978

To

All Secretaries P.W.D. in the States and Union Territories
(Dealing Central Sector roads).

Subject : Central Aid Programme of State roads of Inter-State or Economic Importance — Proforma for submission of particulars of sanctioned estimates

I am directed to say that the particulars of the estimates technically sanctioned by the State Government, etc. under delegated powers in respect of the works approved under the Central Aid Programme of State Roads of Inter State or Economic Importance may hereafter, kindly be submitted to this Ministry in the proforma enclosed. The requirement of the State Govts. communicating to this Ministry particulars of estimates sanctioned within the delegated powers of States is an old requirement. As the State Govt. are aware, without these particulars and the statement that the scheme has been accepted by the State Finance Deptt. for financial sanction, it is not possible for this Ministry to authorise audit to admit expenditure against central funds and to release the yearly allotment of funds. This is, therefore, a very essential requirement and needs to be attended to with utmost importance and urgency.

Statement showing the particulars of technically sanctioned estimate in respect of work financed under the Central Aid Programme of State Roads of Inter-State or Economic Importance.

1. Name of the State
2. No. and date of Govt. of India's letter in which the work was approved.
3. Total estimated cost of the work as approved by the Govt. of India.
4. Name of the work as approved by the Govt. of India and technically sanctioned by the competent authority (Index map showing location of work as originally proposed to be enclosed)
5. Total estimated cost as technically sanctioned.
6. No. date and designation of the authority according technical sanction to the estimate (copy of sanction letter to be enclosed).
- *7. Excess in the estimate, if any, and the source from which the State Govt. has decided to meet
8. Remarks, if any.

Signature _____
Designation _____

1. Certified that no element of agency charges or departmental charges has been included in the estimate technically sanctioned.
2. Certified that the State Finance department have accepted the scheme for financial sanction.

Signature _____
Designation _____

*In accordance with the terms and conditions of loan assistance, the Central Financial liability will be restricted to the approved amount of loan assistance and the excess, if any, over and above that amount will have to be borne by the State Govt. from their own resources.

No. RW/PL-10 (4)/80

Dated the 22nd Jan. 1980

To

The Secretary to the Govt. of Andhra Pradesh/Bihar/Goa/Gujarat/Haryana/Himachal Pradesh/J & K/Kerala/Karnataka/Madhya Pradesh/Maharashtra/Manipur/Mizoram/Nagaland/Orissa/Pondicherry/Punjab/Rajasthan/Tamilnadu/Uttar Pradesh/West Bengal (Departments dealing with roads).

Subject : Central Loan Assistance for State Roads of Inter-State or Economic Importance in the Fourth and Fifth Five Year Plans-Centrally Sponsored Plan Scheme

I am directed to invite your attention to this Ministry's letters No. PL-10(167)/70, dated the 22nd January, 1971 and PL-10(112)/72-Vol. II dated the 20th January, 1977 as amended from time to time regarding lists of road/bridge projects pertaining to your State/UTs selected by the Govt. of India for loan assistance under the Central Aid Programme of State Roads of Inter-State or Economic Importance in the Fourth and Fifth Five Year Plans for assistance of 100% loan assistance.

2. As you are already aware, in accordance with the decisions taken on the recommendations of the National Development Council, Centrally Sponsored Schemes included in the draft Sixth Plan have been divided into the following two categories in so far as roads and bridges under the Programme of State Roads of Inter-State or Economic Importance are concerned with effect from the 1st April, 1979 vide Planning Commission letter No. M-12043/7/78-CDN dated 28-7-1979 to State Chief Secretaries.

- (i) **Inter-State Road/bridge schemes.** These Schemes will continue to be centrally Sponsored schemes and for such schemes funding by the Central Government for individual works will continue to be 100% loan assistance upto the approved cost approved for assistance by Central Govt. as before;
- (ii) **Road/bridges of Economic Importance.** These Schemes will also continue to be Centrally Sponsored schemes but in respect of these financing will be on a sharing basis between the centre and the State/U.T. on 50 : 50 basis upto the cost approved by Central Govt. and the amount in excess of Central share shall be borne by State Govt. from their own resources wholly.

The E & I roads programme approved so far have been recast under the above two categories. Central loan assistance as stated above will be provided by the Government of India towards the cost of the selected schemes to the extent indicated in the enclosed statements of :—

- (i) Inter-State Roads; and
- (ii) Roads of Economic Importance.

Any excess over the amounts indicated in the enclosed statement will have to be met by State Government from their own resources. Further, I am to draw your particular attention to the following :—

- (a) No agency charges will be Payable to the State Government for the execution of these works;
- (b) Future maintenance and up-keep of the project (a) after completion will be the responsibility of the State Government concerned.

3. As regards the sanction of estimates, terms and conditions of loan, method of progress reporting etc., the procedure laid down in this Ministry's letter No. PL-30 (141)/69, dated the 19th July, 1971 as amended from time to time, will be applicable and may, therefore, kindly be kept in view while processing the estimates for the projects detailed in the enclosed statements.

4. The upto date Progress Report on each work and prescribed quarterly Progress reports in future thereafter with details of Job No. and the expenditure incurred thereon etc. may kindly be furnished to the Roads Wing of this Ministry, urgently in duplicate.

No. RW/PL-10(6)/81.

Dated the 8th July, 1982

To

The State Govts.

Subject : Central Loan Assistance for State Roads of inter-State or Economic Importance in the Sixth Five Year Plan

I am directed to refer to the correspondence resting with your letter/Memo. (vide list attached), regarding State Government's proposals for loan assistance by the Govt. of India for Road/Bridge

Projects of inter-State or Economic Importance under the Central Aid Programme of State Roads of inter-State or Economic Importance as part of the Sixth (1980-85) Five-Year Plan. As already indicated, the pattern of loan assistance available for projects forming part of the afore-said Central Aid Programme of State Roads of inter-State or Economic Importance in the Sixth Five-Year Plan has been slightly changed to previous plans is as under :—

- (i) In the case of inter-State projects, the Central loan assistance is provided equal to 100% of the Centrally approved cost, the excess, if any, over the approved cost being met by the State Govt. from their own resources; and
- (ii) In the case of Intra-State projects of economic importance, the Central loan assistance will be equal to 50% of the centrally approved cost, the balance including excess, if any, over the approved cost being met by the State Government from their own resources.

This is applicable both to carry-over (including Fifth Plan works) and new works. It is noted that the State Government have accepted this pattern of Central financial assistance and are agreeable to take loan for selected project (s) on the basis of new pattern of loan assistance indicated above.

2. The State Government's proposals have been examined by the Govt. of India and project (s) [vide list attached] estimated to cost about Rs (vide list attached) lakhs has/have been selected for Central loan assistance by the Govt. of India, keeping in view the available resources and *inter-se* priorities, etc.
3. In view of the large demands received from the State Governments and the limited sum available for loan assistance in the Sixth Five-Year Plan, it has not been possible for the Govt. of India to meet the demands of the State Governments in full and only comparatively essential schemes have been selected for Central loan assistance bearing in mind the need for developing a well co-ordinated system of roads. Central loan assistance will be provided by the Govt. of India towards the cost of the selected schemes to the extent indicated in the enclosed statement. The estimated cost of the selected works have been based on the State Government's own intimation. Any excess over this amount will have to be met by the State Government from their own resources. Further, I am to draw your particular attention to the following :—
 - (i) no agency charges will be payable to the State Govt. for the execution of these works;
 - (ii) future maintenance and up-keep of the project (s) after completion will be the responsibility of the State Government concerned.

I am to request that the State Government's confirmation in respect of these issues may be communicated to this Ministry urgently.

4. As regards the sanction of estimates, terms and conditions of loan, method of progress reporting etc., the procedure laid down in this Ministry's letter No. PL-30 (141)/69, dated the 19th July, 1971, amended from time to time will be applicable and may, therefore, kindly be kept in view while processing the estimates for the projects detailed in the enclosed statement.
5. It may further be added that in order to facilitate the full utilisation of the Sixth Plan provision, the programme as prepared for the country as a whole is in excess of the actual provision, since road/bridge projects take considerable time in preliminary investigations etc. The actual expenditure during the Sixth Plan period will, therefore, be restricted to the provision available in the Sixth Five-Year Plan and will be governed by annual budgetary resources available for the purpose from year to year. The balance at the end of the Sixth Plan will be carried over to the Seventh Five-Year Plan and necessary funds for such carry-over schemes will be provided in that Plan.

Encls : Not printed

124.1 CENTRALLY CONTROLLED WORKS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
124.1.1	1 (8)/PF-II/81 dt. 3.11.1981	Expenditure Finance Committee — Revision of Limits	See Code No. 121.4

124.2 UNION TERRITORIES

Code No.	Circular No. & Date	Brief Subject	Page No.
124.2.1 (121.6)	OR/Misc/22/73 dt. 14.12.73	Union Territories — Highway Projects — Splitting up of Estimates	124.2/1
124.2.2	OR/Misc/27/75 dt. 25.8.75	Schemes/Projects to be Implemented by the Union Territories for inclusion in their Annual Plans — Scrutiny, Technical and Administrative Approval of	124.2/2
124.2.3	PC (P) 2/DL H/74 dt. 18.7.75	—do—	124.2/3
124.2.4	11011/7/81-Finance II dt. 23.3.81	Administrative/Technical Approval of Schemes in Road Sector (including bridges etc.)	124.2/3

No. OR/MISC/22/73

Dated the 14th Dec., 1973

To

All Secretaries dealing with Roads in the Union Territories

Subject : Union Territories — Highway Projects — Splitting up of Estimates

I am directed to invite your attention to the Ministry of Home Affairs letter No. 35/7/61-AC II, dated the 10th January 1963, addressed to the then Union Territory Administrations, copy enclosed for ready reference, and para 67 of the Central Public Works Department Code (Revised Edition 1959), wherein it has been laid down, *inter alia*, that no project should be intentionally split up to bring the part of the project within the delegated powers. In spite of this it has been observed that the practice continues. It may, therefore, please be ensured that in future estimates for highway projects, as they existed in the approved Plan/Scheme, costing more than the delegated powers, should be sent to this Ministry for appropriate sanction.

2. In the case of works other than those mentioned above, sanctioned by the Administration under the delegated powers, it should be ensured that copies of all such sanction orders are endorsed to this Ministry alongwith the following information.

- (i) Name of work;
- (ii) length (kilometre/miles);
- (iii) whether or not included in the approval Annual/Five-Year Plan;
- (iv) Technical Details :

I. ORIGINAL WORKS :

- (a) justification for construction, places connected and their importance;
- (b) terrain — hilly/rolling/plain;
- (c) specifications in brief : width of land, formation and carriageway, general height of the embankment, thickness and composition of the road structure; general idea about type of soils, side drains, etc., annual average rainfall;
- (d) location (name of road, km. and hector/mile and furlong) of bridge and culverts, size and number of spans, type of structure, brief specifications, etc;
- (e) traffic data (as per Indian Roads Congress Standard No. IRC: 19 — 1972 — Traffic Census on Non-urban Roads); and
- (f) a clear map showing all the categories of roads (village roads, other district roads, major district roads, etc.) and the road under consideration in distinct colours, drawn to scale — preferably 1 in = mile.

II. IMPROVEMENT/WIDENING/STRENGTHENING OF AN EXISTING CARRIAGEWAY :

- (a) to (f) same as for Original Works;
- (g) original specifications to which the road was constructed — same details as mentioned under (iv) I (c);
- (h) sanctioned cost of the original work and that at the time of completion;
- (j) dates when the original work was sanctioned, completed, and estimate closed. If not completed and/or estimate closed detailed reasons thereof; and
- (k) reasons for deterioration and full justification for improvement.

4. This letter supersedes all previous letters on the subject.

Enclosure to letter No. OR/MISC/22/73 dt. 14.12.73

LETTER NO. 35/7/61-AC II, DATED THE 10TH JANUARY, 1963 FROM UNDER SECRETARY TO THE GOVERNMENT OF INDIA, MINISTRY OF HOME AFFAIRS, ADDRESSED TO THE CHIEF SECRETARY, HIMACHAL PRADESH/DELHI/TRIPURA/MANIPUR/ANDAMAN AND NICOBAR ISLANDS/SIMLA/AGARTALA/IMPHAL/PORT BLAIR, ETC.ETC.

Sub : Delegation of powers to Administrators in respect of administrative approval and expenditure sanctioned to building and road works.

In supersession of this Ministry's letter No. 35/15/59-AC, II, dated the 1st July, 1959 as amended vide letter No. 35/15/59-AC, II, dated the 27th November, 1959, I am directed to convey the sanction of the President to the delegation to the Lt. Governor, Himachal Pradesh and the Chief Commissioner Delhi/Tripura/Manipur/Andaman and Nicobar Islands power to accord administrative approval as well as expenditure sanction to a building or road work the estimated cost on which does not exceed 10 lakhs (Rupees ten lakhs) only.

2. The expenditure sanction can be accorded even though there is no specific budget provision for the work. The work can, however, be taken up only when funds are provided either in the original budget or by re-appropriation or supplementary demand.
3. No project should be intentionally split up to bring the parts within the above mentioned limit of delegated powers. In this connection, attention is invited to paragraph 67 of the Central Public Works Department Code (Revised Edition 1959).
4. This issues with the concurrence of the Ministry of Finance (Delhi State Division), (Department of Expenditure) vide their U.O. No. 8151-DSDS/62, dated the 31st December, 1962 and 13685-HLL/62, dated the 5th January, 1963 respectively.

124.2.2

No. OR/MISC/27/75

Dated the 25th August, 1975

To

All Union Territories
(Departments dealing with Roads)

Sub : Schemes/projects to be implemented by the Union Territories for inclusion in their Annual Plans — Scrutiny, technical and administrative approval of

I am directed to say that it has been observed that the inclusion of technically and administratively unapproved schemes in the Annual Plans of Union Territories has been responsible for the delay in implementation on schedule of such schemes leading to repeated shortfalls in the Plan expenditure over the years. In order to avoid the recurrence of such a situation in future, the Planning Commission have advised that immediate steps need to be taken by all the Union Territories to prepare a shelf of projects and to submit them to the concerned Central Ministries for examining such proposals leading to their technical/administrative approval. This would facilitate inclusion in the Annual Plans only of such proposals which have the technical and administrative approval of the competent authorities and would help in cutting down considerably the delay in the implementation of schemes and consequent shortfalls in expenditure.

2. The Roads Wing of this Ministry is concerned with roads other than National Highways in Union Territories in the context of the present reference. In order to expedite the implementation of road schemes included in the 5-year Plans of the Union Territories, local Administrations have already been delegated substantial powers for according administrative approval and local administrations are required to forward to this Ministry for their administrative approval only such schemes as exceed the delegated powers. I am to request that in regard to all such road bridge projects, action as per the guidelines of the Planning Commission referred to above for preparing a shelf of projects and submitting them to this Ministry for their examination and necessary approval may be taken up urgently.
3. According to experience in this Ministry, it does not take more than 8-10 weeks for completing the scrutiny and according necessary approval to schemes being submitted to the Roads Wing of this Ministry for administrative approval. This is, however, subject to the condition that the plans and estimates for such projects are accompanied by complete details, and are prepared according to standing circulars, instructions issued from time to time for preparation of project estimates for the schemes. There, however, does happen some delay in cases where the plans and estimates are not accompanied by full details. In order to avoid such situations, instructions may kindly be issued to all concerned to ensure that all proposals submitted to Roads Wing of this Ministry pertaining to Roads other than National Highways in their territory may kindly be accompanied by complete details. I am further to request that a copy of the instructions issued in the matter may kindly be supplied to this Ministry also urgently. Further, a year-wise priority programme for road/bridge works may also be drawn up in respect of the approved 5-Year Plan ceiling and a copy thereof duly cleared by Planning Commission and Union Territories Finance Department supplied to this Ministry.

GOVERNMENT OF INDIA
PLANNING COMMISSION

No. PC(P)2/DLH/74

Dated the 18th July, 1975

OFFICE MEMORANDUM

Sub : Schemes/Projects to be implemented by the Union Territory of Delhi and other Union Territories for inclusion in their Annual Plans — scrutiny technical and administrative approval of

The undersigned is directed to invite attention of the concerned Ministry to paragraph 17 of the summary record of discussions held in the Planning Commission with the Union Territory of Delhi on 23rd May 1975 to consider the difficulties faced by Delhi Administration in implementing development programmes.

It has been observed that the inclusion of technically and administratively unapproved schemes in the Annual Plans of the Union Territories has been responsible for the delay in the implementation on schedule of such schemes leading to repeated shortfalls in the Plan expenditure over the years in view of the fact that considerable time is taken in obtaining the technical and administrative approval of the concerned Ministries in respect of such schemes/programmes. Planning Commission strongly feels that it would be desirable to request the Union Territory of Delhi and other Union Territories to prepare a shelf of projects which should be submitted to the concerned Central Ministries who may, in turn, expeditiously examine such proposals in depth leading to their technical/administration approval. This would facilitate inclusion in the Annual Plans only such proposals which have the technical and administrative approval of the Central Ministries and would help in cutting down the delay in the implementation of schemes and consequent shortfalls in expenditure.

It is, therefore, requested that the Central Ministries may kindly undertake steps to accord such technical/administrative approval in respect of the proposals already received and to be subsequently received from the Union Territory of Delhi and other Union Territories. The technical/administrative approval may be issued under intimation to the Planning Commission.

124.2.4.

LETTER NO. 11011/7/81-FINANCE II, DATED THE 23RD MARCH, 1981 FROM MINISTRY OF HOME AFFAIRS, GOVT. OF INDIA ADDRESSED TO THE CHIEF SECRETARY, DELHI ADMINISTRATION, NEW DELHI AND COPY FORWARDED TO MINISTRY OF SHIPPING & TRANSPORT WITH REFERENCE TO THEIR U.O.NO. 1042/TF.IV/6 DATED THE 18TH MARCH, 1981

Sub : Administrative/technical approval of schemes in road sector (including bridges etc.)

I am directed to refer to the d.o. letter No. 60/LG/81 dated the 20th February, 1981 from the Lt. Governor to Home Secretary and to say that it has been decided in consultation with Ministry of Shipping and Transport that the Administration will be competent to accord administrative approval to the schemes for construction of roads/bridges upto Rs. 50 lakhs in each case subject to the following conditions :—

- (i) no splitting up of estimates is resorted to as brought out in the Ministry of Shipping and Transport letter No. OR/MISC/22/73 dated the 14th December, 1973;
- (ii) broad details of the works sanctioned by Delhi Administration under their delegated powers, are intimated to the Ministry of Shipping; and
- (iii) the budget provision for the work exists.

Such schemes need not be referred for technical scrutiny to the Ministry of Shipping and Transport (Roads Wing) before issue of administrative approval.

Reference Ministry of Home Affairs' Note a meeting is being held in the Ministry of Home Affairs to consider the question of increasing the powers of Delhi Admn. Its outcome may be awaited. As regards

124.2/4

others, it is suggested to increase the powers as under :—

Administration	Powers to accord administrative approval	Powers to accord expenditure sanction
Chandigarh & Arunachal Pradesh	50.00 lakhs	Full
Goa, Dman & Diu, Pondicherry, Mizoram, Dadra & Nagar Haveli, Andaman & Nicobar Islands.	25.00 lakhs	—do—
Lakshadweep Islands.	5.00 lakhs	5.00 lakhs

Ministry of Home Affairs (Attention Shri B.P. Mishra, Dy. Secy.) U.O. No. RW/MZ/16/W-OR dated the 30th June, 1982.

124.3 ROADS IN TRIBAL AREAS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
124.3.1	NH-III/Coord/72-81 Vol. III dated 26.4.84	Proposals under the Grant-in-Aid Programme of Development of Roads in Tribal Areas during 1984-85	124.3/1
124.3.2	RW/NH-III/Coord/24/85 dt. 4.4.85	Proposals under the Grant-in-Aid Programme of Development of Roads in Tribal Areas during the Seventh Five Year Plan 1985-90	124.3/5

No. NH III/Coord/72-81-Vol III

Dated the 26th April, 1984

To

All the State Chief Engineers
(Dealing with roads)

Subject: Proposals under the grant-in-aid programme of development of roads in Tribal Areas during 1984-85

The Planning Commission had proposed an outlay of Rs. 6.5 crores during the Sixth Five Year Plan for development of roads in Tribal Areas under the grant-in-aid programme of this Ministry. As per the general guidelines laid down for selection of projects under this programme, the proposals would be examined by Planning Commission in consultation with the Ministry of Home Affairs and the Ministry of Shipping & Transport.

The outlay likely to be available under this programme during 1984-85 is Rs. 3.5 crores. This Ministry has already approved during 1983-84 certain schemes costing Rs. 8.3 crores and considering their spill-over expenditure, the likely cost of new projects to be approved during 1984-85 would be very much limited. You are, therefore, requested to send proposals for 3 or 4 proposals only arranged in order of priority for consideration by the appropriate authorities. These proposals may be addressed to the Ministry of Home Affairs, (Shri D.N. Tewari, Director) Tribal Development Division, Central Secretariat, North Block, New Delhi- 110 001 with a copy to this Ministry.

Procedure to be followed for the approval of the schemes under the grant-in-aid programme is enclosed as per Annexure I. In the first instance, it is sufficient to send us the particulars as per para 1 of the Annexure I.

You are requested to send your proposals for the grant-in-aid programme so as to reach the Ministry of Home Affairs (and copy to this Ministry) by 31st May 1984.

ANNEXURE I

PROCEDURE FOR APPROVING AND ADMINISTERING GRANT-IN-AID SCHEME UNDER CENTRAL SECTOR PLAN FOR DEVELOPMENT OF ROADS IN TRIBAL AREAS (1980-85)

1. Proposals under this head will have to be submitted by the State Governments/Union Territory Administrations or their authorised representatives to the Government of India (Ministry of Shipping and Transport, Ministry of Home Affairs and the Planning Commission) giving the following details in respect of each scheme:—

1. A map of the State/Union Territory indicating the proposed scheme.
2. A note on the existing condition of the road indicating inter-alia the lane-width, pavement composition, geometric deficiencies etc. and in the case of bridge the width, load carrying capacity, condition of structure, etc.
3. Scope of the proposed development and estimated cost, and
4. A comprehensive report on the utility of the scheme.

* 2. The following procedure may be followed for according technical approval and financial sanction for projects forming a part of this scheme:

- i) The State Govts. can themselves approve technical and financial sanction to the estimates for an approved project costing upto and including Rs. 1 crore, detailed estimates costing more than Rs. 1 crore being submitted to the Govt. of India for their prior technical approval and financial sanction.
- ii) After the State Govts. have approved the estimate for an approved project as per (i) above, they would send the Ministry of Shipping & Transport particulars of the sanctioned estimate (as per Annexure II-A enclosed) along with a statement that the scheme has been accepted by the State Finance Deptt. for financial sanction. On receipt of these particulars the Ministry of Shipping and Transport would authorise the Audit to admit expenditure against Central Funds and thereafter money would be released for expenditure on the approved project keeping in view availability of resources and requirements of the State.
- iii) For purposes of exercising delegated powers referred to under (i) above, the States shall not be permitted to split up a project.
- iv) No agency charges would be payable for the works in question.
- v) Excess, if any, over & above the initially approved Central share of cost would have to be met by the State Govts. concerned from their own resources.
- vi) The future maintenance and up-keep of the road after construction would be the responsibility of the State Govts. concerned.
- vii) The State Govts. shall submit to the Ministry of Shipping and Transport in the prescribed proforma quarterly physical progress reports on the project.

3. In the case of schemes costing over Rs. 100 lakhs the detailed estimates and plans should be forwarded to the M.O.S.T. (RW) for technical approval and financial sanction. For schemes costing over Rs. 2 crores, detailed estimates should be accompanied by further data as in the case of N.H. projects for processing the case before the Expenditure Finance Committee.

4. For purposes of exercising the delegation of powers referred to in para 2 above, it is not permissible to subdivide a major

scheme with subsections so as to bring them within that purview. Schemes as appearing in the Union Govts. communications acceptance of the proposal (mentioned in para 2 above) can not therefore be split into subsections subsequently.

5. The brief specifications and standards for individual schemes shall be based on the Indian Roads Congress Standards, Ministry's specifications for the appropriate category of roads and bridges shall be followed by the State PWD/Union Territory for preparation, sanction and execution of all the projects under this Grant-in-Aid Scheme.
6. Central liability in respect of sanctions under this Grant-in-Aid scheme would in no case exceed the approved cost indicated by the Govt. of India. The scope of work may be framed so as to complete the work within the approved cost. Excess, if any over the approved cost will have to be met by the State Govt. from their own resources. Future maintenance and upkeep of the project after completion will be the responsibility of the State Govt. concerned.
7. The following progress reports will be submitted by the State/U.T. Chief Engineer to the Ministry of Shipping and Transport (Roads Wing) for all projects under the scheme whether sanctioned by the Govt. of India or the State Govt/U.T. Admn.
 - i) Quarterly progress report in the prescribed form (Proforma RI/74 & BI/74) and also in progress charts as for Central Sector Road/Bridge works (Proforma RI/74 and BI/74 enclosed) in *Annexure IIB*.
 - ii) Monthly expenditure Report in the prescribed form *Annexure IIC*.

A completion report/certificate duly verified by Audit should be sent as soon as work is completed.

ANNEXURE II A

PARTICULARS OF ESTIMATE TECHNICALLY SANCTIONED BY THE STATE/U.T. GOVT. FOR CENTRAL SECTOR SCHEMES OF MINISTRY OF SHIPPING AND TRANSPORT FOR DEVELOPMENT OF ROADS IN TRIBAL AREAS

- | | | |
|----|--|---|
| 1. | Name of the State/U.T. | : |
| 2. | Name of the Scheme | : |
| 3. | No. and date of G.O.'s letter in which the scheme was approved | : |
| 4. | Estd. cost as approved by G.O.I. | : |
| 5. | Estd. cost as technically sanctioned | : |
| 6. | No. and date of technical sanction (A copy of the letter to be enclosed) | : |
| 7. | Excess in the estimate, if any, and the source from which the State Govt. has decided to meet. | : |
| 8. | Remarks, if any. | : |

Signature
Designation

CERTIFICATES

1. Certified that no element of agency charges or departmental charges has been included in the estimate technically sanctioned.
2. Certified that the State Finance Deptt. has accepted the scheme for financial sanction.

ANNEXURE IIB

QUARTERLY PROGRESS REPORT (ROAD WORKS) PROFORMA RI/74

STATE _____ FOR QUARTER ENDING _____ 198

Name of work	PWD Division	Date of commencement
Job No.	PWD Circle	Target date of completion
Date	NH. No.	(i) Original
Sanctioned Amount	Subsection	(ii) Revised
(i) Original	Section	Agency executing the work
(ii) Revised	Length : From Km to Km.	

Sl. No.	Item of work	As per estimate	198	Cumulative - 198	Physical Progress (%) for the period ending																											
					198 - 198																											
					Sep : Dec : Mar June : Sep Dec : Mar June : Sep Dec : Mar																											
Qty. : Unit		Tar- get	Act- ual	=	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A	T	A				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28					
1.	Land Acquisition																															
2.	Clearing & Grubbing																															
3.	Earthwork																															
4.	Sub-base																															
	a) Moorum/Gravel																															
	b) Stabilised Soil																															
5.	Base																															
	i) Brick (Flat/Edge)																															
	a) Collection																															
	b) Laying																															
	ii) Base Metalling																															
	Brick/Stone Agg.																															
	a) Collection																															
	b) Laying																															
	iii) Base (Bit. Macadam)																															
	a) Collection (i) Agg.																															
	ii) Bitumen																															
	b) Laying																															
6.	Wearing course																															
	SD/PC/SDC/CC*																															
	Collection																															
	a) Aggregates Bitumen/Cement																															
	b) Laying																															
7.	Culverts																															
	a) Widening																															
	b) New Construction/ reconstruction																															
8.	Retaining Wall/ Breast Walls																															
9.	Overall Progress Percentage																															
10.	Expenditure (Rs. in lakhs)																															
11.	Quality control																															

Certified that the requisite quality tests for ensuring the execution of work to

Certified that the requisite quality tests for ensuring the execution of work to proper standards and specifications have been carried out during the period under report and that records of test results thereof are maintained.

Budget Provision	198 -198	198 -198	198 -198	Average daily labour strength	Report No.....
Initial allotment				i) Skilled.....(ii) Unskilled.....	Date
Revised " "				Plant & Machinery in use	
Final " "				Bottlenecks, if any, and action taken	Signature of EE
					Name
					Address

Indicate Position Regarding Compliance of remarks contained in the Technical Note if complied with
Quote Ref. No. & Date.....

* Strike out whichever is not applicable.

PROFORMA BI/74

QUARTERLY PROGRESS REPORT (BRIDGE WORKS)

 State
 For Quarter Ending

A	1) Bridge in Km on NH No.	5) Tenders called on	9) Job No.
	2) Spans (Total Length m)	6) Tender accepted on	10) Circle
	3) Sanctioned I d. cost/date	7) Work commenced on	11) Division
	i) Original Rs.	8) Target date of completion	12) Contractor
	ii) Revised Rs.	i) Original	
	4) Tender premium or discount	ii) Revised	

S.No.	Items	Total	Quantity	Target	dates	for %	progress	Cumulative	progress
		Qty.	Unit	Start	25%	50%	75%	100%	To end of previous Quarter
									To end of present Quarter " Target Actual
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
B.I	FOUNDATIONS								
	a) Execution								
	b) Foundation Concrete								
	c) Curb								
	d) Steining								
	e) Sinking								
	f) Plugging								
	g) Well caps								
II	SUBSTRUCTURE								
	a) Piers								
	b) Abutments								
	c) Wings								
	d) Bearings								
III	SUPERSTRUCTURE								
	a) Girders Casting								
	b) Girders Launching								
	c) Deck slab/Foot Paths								
	d) Wearing Coat								
IV.	PROTECTIVE WORKS								
V.	APPROACHES								
	a) Land acquisition								
	b) EW & CD Works								
	c) Pavement								
VI.	Overall physical progress for whole job (%)								

C	Materials	Required	1) Cement	2) M.S.	3) H.T.S.	4) Torsteel
		Collected so far				

D	Cumulative Expenditure	1) End of last March Rs	4) Budget provision Rs
		2) End of last quarter Rs	5) Initial Allotment Rs
		3) End of present quarter Rs	6) Revised Allotment Rs
			7) Final Allotment Rs

E	Indicate position regarding compliance of remarks contained in the Technical Note if complied with Ref. No. and date
F	Bottlenecks if any and action taken.
G	Special remarks
H	Certified that the requisite quality control tests for ensuring the execution of work to proper standard and specifications have been carried out during the period under report and that records of test results thereof are maintained.

Report No Submitted to	Date
For use in Roads Wing only	Est. File No. Tender File No.
	Design File No. Progress File No.

ANNEXURE II/B

**STATEMENT OF EXPENDITURE ON DEVELOPMENT OF
ROADS IN TRIBAL AREAS**
Central Sector Grant-in-Aid Scheme of the Ministry of Shipping & Transport (Roads Wing)

State: _____

Head of Account to which the expenditure is debitale :—

S.No.	Name of the Project	Job No.	Amount of Central Grant-in-aid approved for the work	Progressive amount of Grant-in-aid released upto end of previous financial year.	Progressive expenditure up to end of previous financial year.	Expenditure from 1st April of current financial year upto end of previous month	Expenditure during the month under report	Total (Cumulative expenditure upto end of the month under report)	Remarks
-------	---------------------	---------	--	--	---	---	---	---	---------

124.3.2

No. RW/NH.III/COORD/24/85

Dated the 4th April, 1985

To

The Chief Engineers of all States and UTs.

Subject : Proposals under the grant-in-aid programme of development of roads in tribal areas during the Seventh Five Year Plan 1985-90

In the Sixth Five Year Plan (1980-85) certain roads in Tribal Areas in various states have been approved under the grant-in-aid programme of this Ministry. The Ministry is keen that such grant-in-aid schemes are taken up and completed on time. As mentioned in the approval letter, quarterly progress reports in respect of each of the schemes need to be sent to this Ministry. This requirement may be complied with and every effort made to complete these works within the time schedule indicated in the letter approving each scheme.

2. In order to select schemes for the Seventh Plan, a list showing the proposed schemes arranged in order of priority with estimated costs may be furnished in respect of your state. This list may be furnished to the Director Tribal Development Division, Ministry of Home Affairs, Lok Nayak Bhavan, Khan Market, New Delhi, with a copy to this Ministry. While sending the list of proposed schemes, a brief details of progress in respect of each scheme already sanctioned, if any, under the grant-in-aid programme may also be supplied.
3. A note detailing the procedure for approving and administering schemes under programme for development of roads in tribal areas is enclosed at Annexure I.

ANNEXURE I

PROCEDURE FOR APPROVING AND ADMINISTERING GRANT-IN-AID SCHEME UNDER CENTRAL SECTOR PLAN FOR DEVELOPMENT OF ROADS IN TRIBAL AREAS

1. Proposals under this head will have to be submitted by the State Governments/Union Territory Administrations or their authorised representatives to the Government of India Ministry of Home Affairs, giving the following details in respect of each scheme :—
 1. A map of the State/Union Territory indicating the proposed scheme.
 2. A note on the existing condition of the road indicating inter-alia the lane-width, pavement composition, geometric deficiencies etc. and in the case of bridge the width, load carrying capacity, condition of structure, etc.
 3. Scope of the proposed development and estimated cost, and
 4. A comprehensive report on the utility of the scheme.

The Government of India would accord approval in principle to schemes based on the details furnished by State/Union Territories.

2. The following procedure may be followed for according technical approval and financial sanction for projects forming a part of this programme :—

- (i) The State Govts. can themselves accord technical and financial sanction to the estimates for an approved project costing upto and including Rs 1 crore, detailed estimates costing more than Rs 1 crore being submitted to the Govt. of India for their prior technical approval and financial sanction.
 - (ii) After the State Govts. have accorded sanction to the estimate (costing upto Rs 1 crore) for an approved project as per (i) above, they would send to the Ministry of Shipping & Transport particulars of the sanctioned estimate (as per annexure II-A enclosed) along with a certificate that the scheme has been accepted by the State Finance Deptt. for financial sanction. On receipt of these particulars, the Ministry of Shipping and Transport would authorise the Audit to admit expenditure against Central funds and thereafter money would be released for expenditure on the approved project as per prescribed procedure and keeping in view availability of resources and requirements of the State.
 - (iii) For purposes of exercising delegated powers referred to under (i) above, the State shall not be permitted to split up a project.
 - (iv) No agency charges would be payable for the works in question.
 - (v) Excess, if any, over & above the initially approved Central share of cost would have to be met by the State Govts, concerned from their own resources.
 - (vi) The future maintenance and up-keep of the road after construction would be the responsibility of the State Govts. concerned.
 - (vii) The State Govts. shall submit to the Min. of Shipping and Transport in the prescribed proforma quarterly physical progress reports on the project as per Ministry's standard forms.
3. In the case of schemes costing over Rs 100 lakhs the detailed estimates and plans should be forwarded to the M.O.S.T. (RW) for technical approval and financial sanction. For schemes costing over Rs 2 crores, detailed estimates should be accompanied by further data as in the case of NH projects for processing the case before the Expenditure Finance Committee.
 4. For purposes of exercising the delegation of powers referred to in para 2 above, it is not permissible to subdivide a major scheme with subsections so as to bring them within that purview. Schemes as appearing in the Union Government's Communication on acceptance of the proposal (mentioned in para 2 above) cannot therefore be split into subsections subsequently.
 5. The brief specifications and standards for individual schemes shall be based on the Indian Roads Congress Standards. Ministry's specifications for the appropriate category of roads and bridges shall be followed by the State PWD/Union Territory for preparation, sanction and execution of all the projects under this Grant-in-aid Scheme.
 6. Central liability in respect of sanctions under this Grant-in-Aid scheme would in no case exceed the approved cost indicated by the Govt. of India. The scope of work may be framed so as to complete the work within the approved cost. Excess, if any over the approved cost will have to be met by the State Govt. from their own resources. Future maintenance and upkeep of the project after completion will be the responsibility of the State Govt./Union Territory concerned.
 7. The following progress reports will be submitted by the State/Union Territory Chief Engineer to the Ministry of Shipping and Transport (Roads Wing) for all projects under the scheme whether sanctioned by the Govt. of India or the State Govt./U.T. Admn.—
 - (i) Quarterly progress report in the prescribed form as in the case of all Central Sector Works.
 - (ii) Monthly expenditure Report in the prescribed form Annex. II B)
 A completion report/certificate duly verified by Audit should be sent as soon as the work is completed.

ANNEXURE II A

PARTICULARS OF ESTIMATE TECHNICALLY SANCTIONED BY THE STATE/UNION TERRITORY GOVT. FOR CENTRAL SECTOR SCHEMES OF MINISTRY OF SHIPPING & TRANSPORT FOR DEVELOPMENT OF ROADS IN TRIBAL AREAS.

1. Name of the State/Union Territory :
2. Name of the Scheme :
3. No. and date of G.O.'s letter in which :
the scheme was approved.
4. Estimated cost as approved by G.O.I. :
5. Estimated cost as technically :
sanctioned
6. No. and date of technical sanction (A :
copy of the letter to be enclosed).
7. Excess in the estimate if any, and the :
source from which the State Govt has
decided to meet
8. Remarks, if any. :

Signature
Designation

CERTIFICATES

1. Certified that no element of Agency charges or Departmental Charges has been included in the estimate Technically sanctioned.
2. Certified that the State Finance Deptt. has accepted the scheme for financial sanction.

ANNEXURE IIB**STATEMENT OF EXPENDITURE ON DEVELOPMENT OF
ROADS IN TRIBAL AREAS****Central Sector Grant-in-Aid Scheme of the Ministry of Shipping & Transport (Roads Wing)****State****Head of Account to which the expenditure is debitable ;—**

S.No.	Name of the Project	Job No.	Amount of Central Grant-in-Aid aproved for the work	Progressive amount of Grant-in-Aid released upto end of previous financial year.	Progressive expenditure up to end of previous financial year	Expenditure from 1st April of current financial year upto end of previous month	Expenditure during the month under report	Total cumulative expenditure upto end of the month under report	Remarks
-------	---------------------	---------	---	--	--	---	---	---	---------

124.4 STRATEGIC ROADS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
124.4.1	PL-30(154)/74 dt. 9.7.1975	Adjustment of Expenditure on Strategic Roads	124.4/1

No. PL-30(154)/74

Dated the 9th July, 1975

To

The Secretary to the Govt. of Assam, J&K, Rajasthan, West Bengal, Tripura, Arunachal Pradesh, Meghalaya, Haryana, Punjab and Himachal Pradesh. (Department dealing with Strategic roads).

Subject : Adjustment of expenditure on strategic roads

I am directed to refer to this Ministry's letter No. PL-30 (110)/74 dated the 25th September 1974 (copy enclosed) regarding adjustment of expenditure on National Highways and to say that the orders contained in the above letter regarding the revised limits upto which the Accountant General or the Comptroller concerned is empowered without the requirement of sanction to a revised estimate to pass any excess over the sanctioned estimates for a work upto a limit of 15% of the amount sanctioned for the work by the Govt. of India or Rs 1 crore, whichever less, will be applicable in case of strategic roads also.

2. The exercise of the above powers will be subject to the condition that the excess is caused by routine factors such as increase in cost of labour or material during the period and not due to the revision in the scope or enlargement of the work or of the specifications already approved.
3. I am to add that reports of cases where excesses have been approved by State Governments/Union Territories Administrations should be submitted to this Ministry alongwith the following two returns indicating clearly the extent of excess allowed over the sanctioned cost of the project :—
 - (i) Proposals for annual Revised Estimates/Budget Estimate; and
 - (ii) Return showing the final work-wise requirements of funds for Strategic roads works during a financial year.

Necessary proforma for the budgetary returns under (i) and (ii) above to also include information in regard to excesses over the approved costs of projects are enclosed at Annexures I and II respectively for adoption in future.

Encls : Not Printed.

ANNEXURE I

Revised Estimates and Budget Estimates for the Construction and Development of Strategic Roads in the State of

S.No.	Name of work	Job No.	Approved estimated cost	Extent to which excess over approved cost passed by State competent authority.	Actual expenditure to end of previous year.	Budget Estimate current year.	Actuals first five months of current year.	Revised Estimate current year.
1	2	3	4	5	6	7	8	9
			Rs	Rs	Rs	Rs	Rs	Rs
			Budget Estimate next year	Likely expenditure year after next.	Reasons for variation between col. 7 and 9.	Reasons for variation between col. 9 and 10.	Revised Estimate sent or not in cases where outlay exceeds approved cost beyond permissible limit.	Remarks
			10	11	12	13	14	15
			Rs	Rs				

ANNEXURE II**Final requirements of funds in respect of Strategic roads.**

S.No.	Name of work	Job No.	Approved cost	Extent to which excess over approved cost passed by State competent authority.	Actual expenditure to end of previous year.	Actual expenditure during first eight months of the current year.	Anticipated expenditure during remaining four months of the current year.
1	2	3	4	5	6	7	8
			Rs	Rs	Rs	Rs	Rs
	Total estimated expenditure during current year (col. 7 and 8)	Total estimated expenditure upto end of current year (col. 6 & 9)	Existing budget provision for current year.	Additional funds required (+) or surrender proposed (difference between col. 9 and 11)	Revised estimates sent or not in cases where outlay exceeds approved cost beyond permissible limit	Reasons for col. 12.	
9	10	11	12	13	14		
Rs	Rs	Rs	Rs	Rs			

130 TENDERS, CONTRACTS AND ARBITRATION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
130.1.	WI-43(9)/65 dt 9.6.65	Acceptance of Tenders for Road & Bridge Works Financed Entirely Out of Central Govt. Funds	130/1
130.2.	NHI-41(14)/68 dt 4.9.68	—do—	130/1
130.3.	WI-43(9)/65-NHI dt 9.4.69	Procedure for Disposal of Tenders for Road & Bridge Works Financed Entirely out of Central Govt. Funds	130/2
130.4.	WI-43(9)/65 dt 27.6.69	—do—	130/2
130.5.	NHI-46 (29)/69 dt 17.11.69	Introduction of a Clause in the Contract form for NHs and other Centrally Aided Works for Engagement of Apprentices for the Contractors under Apprentices Act, 1961	130/3
<u>130.6.</u> <u>121.2.</u>	NHIII/33 (28)/72 dt 16.6.72	Forwarding of Estimates & Tenders for NH Works	See Code No. 121.2
130.7.	NHIII-33 (108)/72 dt 28.3.73	Tenders for R & B Works Financed Entirely by the Central Govt. Funds	130/3
130.8.	NHIII/P/54/76 dt 25.6.76	Tenders of NH(R) Works- Information Required	130/4
130.9. 121.6.	PL-30(62)/76 dt 26.6.76	Tenders for R & B Works on NHs	130/5
130.10. 7520.	N-47/KR/30/75 dt 20.7.76	Examination of Tenders for Balance NH Works at the risk and Cost of the Original Contractor	See Code No. 7520
130.11. 121.5.	NHIII/P/14/77 dt 6.7.77	Procedure regarding Processing of Sanctioning of R.E. for NH Works Received from the State Govt. Consequent upon the Cancellation of the Original Contract at the risk & Cost of Original Contractor	See Code No. 121.5.
130.12. 121.6.	NHIII/P/2/77 dt 30.11.77	Splitting up of Sanctioned Estimates for Tenders	See Code No. 121.6
130.13.	NHIII/Coord/7/78 dt 12.7.78	Payment of Escalation to Contractors Entrusted with the Execution of Projects	130/6
130.14. 121.5.	PL-30 (6)/80 dt 19.1.80	Submission of Revised Estimates — Procedure Regarding Submission of Tender Case	See Code No. 121.5

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
130.15.	RW/N-7/MD/2101/W dt 13.7.82	Action taken notice on the Recommendations of the PAC contained in their 88th Report on para 13 of the Advance Report of the C & AG of India for the year 1979-80-Union Government (Civil) on NHs.	130/6
130.16.	N-47/KR/396/82 dt 7.9.82	Procedure for Finalisation of Tenders - Need for Avoiding delays	130/7
130.17.	RW/NHIII/P/12/79 dt 30.9.83	Arbitration System for NH Works.	130/8
130.18.	RW/NHIII/P/22/83 dt 28.12.83	Model Contract Document for Lumpsum Contract for Highway Bridges	130/11
130.19.	RW/NHIII/P/3/84 dt 11.7.84	Credit of Sale Proceeds of Tender forms to the Revenue of the State Governments	130/12
130.20.	NHIII/P/4/82 dt 11.7.84	Prequalification of Tenderers for Execution of Major Road and Bridge Works on NHs and under other Centrally Financed Schemes	130/12
130.21. 204	NHIII/Coord/30/84 dt 11.10.84	Fixing up Realistic time Targets for Projects/Tenders	See Code No. 204
130.22.	NHIII/P/4/82 dt 10.5.85	Intimation to State PWD Regarding Advance Action on Prequalification	130/15
130.23.	RW/NHVI-50(3)/83 dt 15.7.85	Restricting the Practice of Inviting lumpsum Tenders for Bridge Works	130/16

130.1

No. WI-43 (9)/65

Dated the 9th June, 1965

To

All State Governments,
(Deptt. dealing with N.Hs),
except Tripura and Andaman and Nicobar Islands.

Subject : Acceptance of tenders for road and bridge works financed entirely out of Central Govt. funds

I am directed to invite attention to the procedure that has been laid down with regard to obtaining the prior approval of the Govt. of India before acceptance of the tenders of N.H. works as well as those for which the entire expenditure is met by the Central Govt. such as, Lateral Road, West Coast Road, etc. According to this procedure tender for such works can be finalised by the State Govt. concerned, only after the technical approval and financial sanction for these works is accorded by the Govt. of India. In case the cost of acceptable tenders for works is more than their sanctioned cost beyond the permissible limits, reference has to be made by the State Govt. concerned to the Govt. of India for obtaining their approval before such tenders are accepted. But even if the tendered amount is within the figure financially sanctioned, a reference to the Govt. of India will be necessary, in case there has been a material deviation from the technically approved designs and/or specifications of the works. Instances have come to notice where the State Govt. have not sought the approval of the Govt. of India to deviation in design and specification, this practice I am to observe, is not correct. The technical approval of such works being the responsibility of the Govt. of India, it follows that if there has been any change in the design or specifications of a work while finalising a tender their technical approval is necessary before the new designs and specifications are implemented in the execution of a work.

2. I am, therefore, to request that in future all such cases of road and bridge works where design or specifications are to be changed while finalising the tender for a work, prior approval of this Ministry should invariably be obtained.

130.2

No. NHI-41 (14)/68

Dated the 4th September, 1968

To

All State Governments

Subject : Tenders for road and bridge works financed entirely out of Central Government funds

I am directed to refer to this Ministry's letter No. WI-43 (9)/65 dated the 9th June, 1965 wherein it was requested that in all cases of road and bridge works where the design or specifications are to be changed while finalising the tender for the work, the prior approval of this Ministry should invariably be obtained. It has been observed that whenever such cases are referred to this Ministry, complete tender documents are sent with comments on the conditions, etc., attached by the tenderers.

2. I am to explain that in those cases where the tender cost is equal to or less than the sanctioned cost of the work, but there has been material deviation from the technically approved design, and or specifications only the plans and designs with relevant details should be sent to this Ministry for technical approval. The other conditions attached to the tender need not be referred to this Ministry but they should be examined by the State Chief Engineer and appropriate decisions taken in accordance with the codal rules laid down in the State regulating decisions and disposal of tenders by him or the State Government as the case may be. When such plans and designs are sent to this Ministry, they should be accompanied by a certificate from the State Chief Engineer/State Government to the effect that acceptance of the deviations and/or revised designs proposed by the tenderers and recommended by the State will not involve any excess over the sanctioned cost as a result of any condition included in the tender. Only in those cases where the amount of the acceptable tender exceeds the permissible limit over the sanctioned cost of the work should all the tenders be sent to this Ministry for consideration and decision.
3. It is requested that the above mentioned procedure should be followed invariably in future.

No. WI-43 (9)/65-NHI

Dated the 9th April, 1969

To

All State Govts. including Union Territories except
Andaman and Nicobar Islands
(Departments dealing with roads)

Subject : Procedure for disposal of tenders for road and bridge works financed entirely out of Central Government funds

I am directed to invite a reference to this Ministry's letter No. WI-43 (9)/65, dated 9th June, 1965 and letter No. NH I-41 (14)/68 dated 4th September, 1968 and to say that in partial modification of the existing procedure, it has now been decided that all minor changes in the design or specifications in respect of small bridges upto a length of 50 ft. may be approved by the State Government subject to the condition that the changes do not increase the sanctioned cost of the work beyond the permissible limit of excess. In case of major changes unless they are covered by approved type designs, approval of the Government of India is necessary.

No. WI-43 (9)/65

Dated the 27th June, 1969

To

All State Governments including Union Territories
(except Andaman and Nicobar Islands), Departments dealing with roads

Subject : Procedure for disposal of tenders for road and bridge works financed entirely out of Central Government funds.

In continuation of this Ministry's letter No. WI-43 (9)/65, dated the 9th April, 1969, on the above subject, I am directed to say that the point as to what constitutes major changes in the design or specifications in respect of small bridges upto the length of 50 feet has been examined and the position is explained in the succeeding paragraphs.

2. Major changes relate to any basic change in the design of the structure from that approved earlier. It is difficult to list out categorically all such changes. However, the following items are given as illustrations which would make the position clear :
 - (i) Changes in the nature of the foundations from deep wells to open shallow foundations or vice versa.
 - (ii) Changes in the type of the superstructure e.g. from simply supported beam and slab superstructure to arch or rigid frame structure.
 - (iii) Increase or decrease in the waterway by more than 20% of the sanctioned amount or the depth of the foundations by more than 5 ft.
 - (iv) Any change in the specified loading and the number of lanes of the bridge from that already specified in the sanctioned proposal.

For such changes, a reference should be made to this Ministry giving necessary justification for revised approval.

3. However, changes like small variation in the length of the bridge, minor shifting of the site of the alignment of the bridge to suit local conditions, small variations in the depth of the foundations (as indicated above) on account of actual soil conditions met with, changes in the number of and size of beams, detailing of reinforcement etc., would constitute minor changes and can be made by the State Chief Engineer provided the cost remains within the sanctioned amount plus permissible limit of excess.

No. NHI-46(29)/69

Dated the 17th November, 1969

To

All the State Governments Administrations

Subject : Introduction of a clause in the contract form for National Highways and other Centrally aided works for engagement of apprentices by the contractors under Apprentices Act, 1961

I am directed to say that according to the Apprentices Act, 1961, it is a statutory obligation to engage a certain number of apprentices according to the prescribed ratio. With a view to meeting this obligation for training apprentices in the building craft trades, the Government of India have decided to introduce the following clause in the Central Public Works Department contract form :—

“The contractor shall during the currency of the Contract when called upon by the Engineer-in-Charge engage and also ensure engagement by sub-contractors and others employed by the contractor in connection with the works, such number of Apprentices in the categories mentioned below and for such periods as may be required by the Engineer-in-Charge. The Contractor shall train them as required under the Apprentices Act, 1961 and the Rules made thereunder and shall be responsible for all obligations of the employer under the said Act including the liability to make payment (s) to Apprentices as required under that said Act”.

Category

Maximum Number to be engaged

(a)

(b)

(c)

etc.

I am to request that the aforesaid clause may be incorporated in all contracts relating to works on National Highways and other centrally aided works. Action taken in the matter may be intimated to this Ministry.

No. NHIII-33 (108)/72

Dated the 28th March, 1973

To

All State Governments & Union Territories

Subject : Tenders for road and bridge works financed entirely by the Central Government funds.

I am directed to invite your attention to this Ministry's letters Nos. WI-43(9)/65, dated the 9th June, 1965 and NHI-41 (14)/68, dated the 4th September, 1968 (copies enclosed for ready reference), and the procedure laid down therein in regard to the acceptance of tenders for road and bridge works financed entirely out of Central Government funds, which is now clarified as follows :

- (i) Tenders for such works can be finalised by the State Government concerned only after the requisite technical approval and financial sanction have been accorded by the Government of India.
- (ii) In case the revised cost of work based on an acceptable tender exceeds or is likely to exceed its original sanctioned estimated cost beyond the permissible limit (which, according to the latest instructions contained in this Ministry's circular letter No. NHI-40(10)/70, dated the 2nd July, 1971, is 10% or Rs. 2.5 lakhs, whichever is less), prior approval of Government of India should be sought and obtained before the acceptance of such tenders. While making a reference to the Government of India in such cases, it should be accompanied by all the tender documents, including alternative designs received with any of the tenders and definite recommendations of the State Government. While doing so, for tenders involving material deviation from approved designs and/or specifications, for the work, the reference to the Government of India should also be accompanied by plans and designs with relevant details and conditions stipulated, if any along with detailed comments thereon by the State Govts./Chief Engineer.
- (iii) If the amount of an acceptable tender for a work is such that the revised cost of the work based on that tender remains within the sanctioned amount plus the permissible excess (as mentioned in para (ii) above), and if there is no material deviation in design and/or specification for the work from those technically approved the State Government may dispose of such tenders without any reference to Government of India. However, in such cases where there are any material deviations in design and/or specification from those technically approved earlier by Govt. of India, a reference should be made by the State Government for obtaining the prior technical approval of the Government of India to the deviation (s) involved, before accepting such a tender. Such a reference to Government of India should be accompanied by plans, designs and relevant details of the acceptable tender, and a certificate from the State Chief Engineer/State Government to the effect that the acceptance of the deviation and/or revised design of the tender under consideration for acceptance, will not entail any excess over the sanctioned cost plus the permissible excess, in view of any conditions

included in the tender which should be carefully examined by the State Chief Engineer/ Government. There is no need to forward the other general conditions of the tender to Government of India.

2. It has now been decided that while making a reference to Government of India in accordance with sub-para (ii) and (iii) of para I above, it is not necessary to forward to the Government of India, the tender papers received by the State Government in original but it would be quite sufficient if certified copies of all those tender papers received are forwarded to the Government of India. Besides, these, a comparative statement, giving the assessment of the various tenders received for the work together with the firm recommendations by the State Government for the award of work may also be forwarded invariably along with all such tender cases.
3. It is also reiterated that while making a reference to the Government of India regarding approval for acceptance of tenders in the aforementioned cases, the position that may have resulted from previous tender calls, if any, alongwith comparative statements, the State Governments' assessment and action if any, taken by the State Governments/State Chief Engineers with reasons therefore should also be invariably intimated.
4. The permissible excess of 10% of Rs 2.5 lakhs mentioned in para 1 (ii) above, is limited to cases as defined in circular letter No. NHI-40 (10)/70, dated the 20th July, 1971.
5. Immediately after obtaining the approval of the Government of India for cases mentioned in para (ii) above, a revised estimate should be prepared based on the accepted tender and forwarded to the Government of India in the prescribed form for obtaining revised financial sanction for the work.

Note : Enclosures not printed.

130.8

No. NH.III/P/54/76

Dated the 25th June, 1976

To

All the Chief Engineers of States
(dealing with National Highways)

Subject : Tenders of National Highway (Road) Works-Information required

To expedite decision on tenders involving excess beyond the permissible limit, it may please be ensured that the information, as indicated in the enclosed list, is also furnished.

Enclosure to letter No. NH.III/P/54/76 DT. 25.6.76

TENDERS FOR NATIONAL HIGHWAY (ROAD) WORKS : INFORMATION REQUIRED

- (i) No. and date of the job
- (ii) Sanctioned amount of the whole job
- (iii) Latest expenditure (as available)
- (iv) Whether the work put to tender is whole as sanctioned or only a part of it. In case it be a part of the remaining work, the reasons as to why it is not whole of the remaining work and the programme of completing the balance work.
- (v) Sanctioned cost of the work put to tender.
- (vi) Cost estimated at present-day rates of the work put to tender. (This cost should be based on the latest schedule of rates with leads, lifts, etc., as actually required.)
- (vii) Tendered cost
- (viii) Percentage excess given by the tendered cost over the sanctioned cost i.e. over (v)
- (ix) Percentage excess or saving given by the tendered cost over the present-day estimated cost i.e. over (vi).
- (x) Sl. No. of the tender-call i.e. whether first, second or third etc.
- (xi) Brief history of the tenders received in the earlier calls.
- (xii) No. of tenders received in the call under consideration.
- (xiii) Validity date of the tender.
- (xiv) In case the work be the same as abandoned by a previous contractor, the action taken against the defaulting contractor.
- (xv) Reasons for variation in items and quantities, if any, from those in the sanctioned estimate. (These would include extra items and substituted items).
- (xvi) Financial implications of each of the conditions, if any, laid-down by the tenderer.
- (xvii) Comparison of rates of bitumen, cement, steel, etc., as provided in the sanctioned estimate and as stipulated for supply in the N.I.T.
- (xviii) Reasons for poor response of tenders.
- (xix) Whether the Chief Engineer considers that reinvitation of the tender is likely to bring down the bid/or is likely to increase the bid.

130.9
121.6

No. PL-30 (62)/76

Dated the 26th June, 1976

To

All State Govts. and Union Territories except
Arunachal Pradesh, Mizoram, Dadra Nagar Haveli
(Departments dealing with National Highways).

Subject : Tenders for Road and Bridge works on NHs.

I am directed to invite a reference to this Ministry's letter No. PL-30(110)/74 dated 25.9.74 wherein the Accountant General or the Comptroller concerned was empowered to pass, without the requirement of the State Govt. obtaining Central Govt's approval to a revised estimate for a National Highway work, excess subject to certain conditions, upto 15% of sanctioned estimate or Rs 1.00 crore whichever is less. Earlier, in their letter No. NH III-33 (108)/72 dated 28.3.73, this Ministry had laid down detailed procedure for handling tenders. According to that procedure where the cost of a work based on acceptable tenders exceeds or was likely to exceed its original sanctioned estimate beyond the permissible limit of excess, prior approval of the Govt. of India was to be obtained before acceptance of such tenders. The State Govts. have, however, been pointing out that considerable time elapses between the sanction of an estimate and the actual commencement of the work and, as a result, by the time a work actually goes on the ground, the tender cost is generally quite in excess of the sanctioned estimate even beyond the aforesaid permissible limit and tenders are, therefore, required to be submitted to the Govt. of India for their approval. In order to expedite the disposal of tenders, suggestions have been made to this Ministry by the State CEs from time to time for making a provision for escalation of cost in the estimate. This matter also came up for discussions at the last meeting of the CEs held at Hyderabad on 6.1.76 when some of the State CEs pointed out that in their States, for state road works, tenders were being examined and settled with reference to the current schedule of rates instead of sanctioned estimate and they suggested that if such a procedure were followed for National Highways also, references about tenders in many cases to the Roads Wing might not be necessary and those could be settled at the State level itself.

2. This matter has been examined, further and in the circumstances explained above, it has been decided that, hereafter the State Govt. may, themselves, accept tenders, if the excess over sanctioned estimate does not go beyond the value determined on the basis of current schedule of rates by 15% subject to the following conditions and also duly complying with the technical requirements specified in paras I(ii) (last sentence), I(iii) 2 & 3 of this Ministry's letter No. NHIII-33(108)/72 dated 28.3.73 (copy enclosed for ready reference).
 - (i) These powers are to be exercised by the State Govt. themselves, who if they so desired, may also delegate these powers to officers not below the rank of the Chief Engineer under intimation to this Ministry.
 - (ii) Tenders are called properly after due wide publicity providing for a healthy competition among the contractors and rates are considered duly competitive, reasonable and justified and:
 - (iii) After the tenders have been accepted by the State Govt., the revised estimates should be sent to the Govt. of India for their sanction within one month of the acceptance of the tenders, this time limit being extended upto 2 months in unavoidable cases, but in any case not beyond that. A copy of the approved current schedule of rates should accompany the revised estimates, invariably.

In this connection, it has to be realised that the State Accountant General will be able to admit expenditure beyond the permissible limit of excess over the sanctioned estimate as so far earlier prescribed only after the sanction for the revised estimate for the job is accorded by this Ministry and also conveyed to the State Accountant General.

Therefore, in the interest of smooth permit of execution of the works, forwarding of Revised Estimate and getting it sanctioned by the Ministry is of paramount importance and is strongly emphasised.

3. I am to add that simultaneously, with the exercising of the power referred to in the preceding para, the State will kindly in each case, send an intimation to this Ministry, with copy to the Regional Officer concerned of this Ministry duly stating particulars of tenders accepted and certifying that the conditions stipulated at (i) and (ii) above had been satisfied. Further the State will kindly also devote attention to see that the contracting industry in the State is in a healthy condition and if this is not so, steps would be taken by the State Govt. to strengthen the contracting industry and also, as an alternative measure to set up Departmental Construction Units/Corporations, as necessary.

4. I am further to add that if the tender rates in any case exceed the current schedule of rates beyond the permissible limit of 15% the tenders should be submitted to Govt. of India for their prior approval.
5. I am to request that this may be brought to the notice of all concerned for necessary action, with the clear instructions that all concerned should ensure that the revised estimate are submitted within one month of the acceptance of tenders, this time limit being extended in totally unavoidable cases, upto two months, but in no case, beyond that.

130.13

No. NHIII/Coord/7/78

Dated the 12th July, 1978

To

All State Governments & Administrations of Union Territories
(Departments dealing with National Highways).

Subject : Payment of escalation to contractors entrusted with the execution of Projects

I am directed to say that the Public Accounts Committee in their Report on Haldia Dock Project have expressed unhappiness over the high escalation claims admitted in respect of some of the contracts. The Committee have desired that Government should carefully examine the merit of the claims keeping in view the relevant factors so that the Project is not saddled with high costs.

2. I am, therefore, to request that the observations of the Public Accounts Committee, as mentioned in the preceding paragraph, may kindly be kept in view by all concerned while examining, dealing with and processing the claims for escalation and extra payments preferred by contractors very carefully regulated by their contract terms and conditions. I am also to add that necessary instructions may please be issued to the State Chief Engineers concerned to ensure that situations leading to the escalation and extra payments to contractors are avoided as much as possible and that these factors are also kept by them in view while drawing up the contracts.

130.15

No. RW/N-7/MD/2101/W.

Dated the 13th July, 1982.

To

The Secretary,
Public Works Departments
of all States and U.Ts.

Subject : Action taken notice on the recommendations of the PAC contained in their 88th Report (Seventh Lok Sabha) on Para 13 of the Advance Report of the C & AG of India for the year 1979-80-Union Govt. (Civil) on National Highways

I am directed to say that Public Accounts Committee, in its 88th Report (1981-82) on the Seventh Lok Sabha, have made critical observations on one of the National Highway Projects in Tamil Nadu because of the delay in the execution of work and excessive cost escalation. A copy of their observations is enclosed for information and guidance. It would be observed therefrom that the Committee have recommended that antecedents and past performance of the contractors should be thoroughly checked before awarding contract relating to Central Sector Projects. The Committee has also felt that in view of the growing tendency of the contractors to back out on contracts, it would be appropriate to undertake departmentally as many works as possible. It is, therefore, requested that the observations/recommendations made by Public Accounts Committee may kindly be kept in view while awarding contracts for Central Sector Projects in future.

OBSERVATIONS BY PAC REFERRED TO LR. NO. RW/N-7/MD/2101/W DT. 13.7.82

Sl.No. Para No.

Conclusions/Recommendations

21 279

The Committee note that this work relating to widening and strengthening of the pavement in National Highways No. 7 between Madurai and Kanyakumari was awarded to a contractor viz., M/s. Nilkanthan & Bros. Construction Pvt. Ltd., Madras in February, 1974 at a cost of Rs 15.48 lakhs. The work was to be completed within 8 months from the date of handing over of site, (i.e. 21st June, 1974). However, the contractor discontinued the work after completing only part of the work with the result that the work had to be entrusted to another contractor for Rs. 24.14 lakhs and the same was completed in July, 1979 only. The Committee further note that the estimate for the work has been revised thrice, the third revised estimate was sanctioned by the Ministry in January, 1980 for Rs 27.02 lakhs against the original estimate of Rs 14.61 lakhs. As against this, an expenditure of Rs 33.72 lakhs had been incurred on the work up to April,

1980. Thus there has been a cost escalation of more than 100 per cent. Moreover, the work which was to be completed in 8 months time actually took about 5 years.

- 22 2.80 The Committee cannot but express their dissatisfaction at this state of affairs. They are further constrained to observe that in some other case also, e.g. construction of a road bridge over Pamban, they have noted the tendency on the part of contractors to back out of the agreements after completing only part of work with the result that not only the work is delayed but it also results in avoidable extra expenditure. The Committee, therefore, recommend that the antecedents and past performance of the contractors should be thoroughly checked before awarding contracts relating to such important works. The Committee feel that in view of this growing tendency of the contractors to back out of contracts, it would be more prudent to undertake departmentally as many works as possible.
- 23 2.81 The Committee note that a sum of Rs. 7.57 lakhs is due from M/s. Nilakanthan & Bros. Construction Pvt. Ltd., Madras. The Committee recommend that speedy action may be taken by Government to recover the amount from the contractor and the details of recovery intimated to the Committee early.

130.16

No. N-47/KR/396/82

Dated the 7th Sept. 1982

To

All State Governments
(Deptts. dealing with National Highways).

Subject : Procedure for finalisation of tenders—Need for avoiding delays.

I am directed to state that the Public Accounts Committee in their 88th Report (Seventh Lok Sabha) has adversely commented on the delay in the finalisation of tenders for a work on the National Highway, and have instructed that such delays should not be allowed to recur in future.

2. An in-depth examination of the case in question, revealed that the delay in settlement of tenders and allotment of the work was primarily due to long post-tender correspondence between the State P.W.D. and the tenderers to obtain various clarifications before the State Government could make final recommendations to the Ministry for approval. The delay has also been due to incomplete recommendations by the State P.W.D. at the time of submission of the case which again required further correspondence between the Ministry and the State P.W.D.
3. The procedure for expeditious handling of the tender cases has already been laid down in this Ministry Circular No. NHIII-30 (108)/72, dated 28.3.1973, and reiterated in this Ministry's letter No. PL-30(62)/76, dated 26th June, 1976. It is once again requested that instructions/guidelines given in the two above mentioned letters may be strictly followed. It may also be ensured that the tenders are received in this Ministry at least a month and a half before the expiry of their validity since in some cases it has been seen that the tenders are received for approval hardly a few days before the expiry of the validity period. It would be appreciated that scrutiny of tenders and revised estimates, and obtaining the concurrence from our Finance requires some reasonable time which in any case is not less than a month or so.
4. In order to avoid unnecessary correspondence between the Department and the tenderers, the State P.W.D. should ensure that the tender documents are made as complete as possible, especially with regard to the technical requirements of the work. Further more, it may also be ensured that the reference made to the Ministry is complete in all respects and includes all relevant information required for processing the tender and the revised estimate for obtaining approval of the finance. Clear cut recommendations of the State Government would be necessary especially in respect of :
 - (a) Reasonableness of the tender;
 - (b) Experience, technical competence and capacity of the recommended tenderer for carrying out the work within the time frame of the contract and in accordance with the specifications laid down; and
 - (c) In case of a single tender, whether recall of tenders would be advisable or not; and if tendered rates are very high, full justification for accepting such a tender.
5. It has also been seen in a few cases that considerable time is lost in furnishing additional information of clarifications sought for by the Ministry from the State P.W.D. Such delays should be avoided and necessary information furnished promptly on priority basis.
6. It is requested that these guidelines may be brought to the notice of all concerned officers in the State P.W.D./State Government dealing with works on National Highways or other Centrally aided works where approval from the Ministry is sought for acceptance of tenders.

No. RW/NHIII/P/12/79

Dated the 30th September, 1983

To

The Secretary, (Deptt. dealing with National Highways)
All State Govts. and Union Territories.

Subject : Recommendations of the group of Engineer-Secretaries, Engineer-in-Chief and Chief Engineers for Arbitration system for NH works and other Centrally sponsored works.

I am directed to say that this Ministry had constituted sometime back a group of Engineer-Secretaries, Engineer-in-Chief and Chief Engineers under the Chairmanship of Shri A.C. Padhi, Engineer-in-Chief and Secretary (Works) Government of Orissa to go into the entire problem of arbitration and make recommendations for efficient arbitration system. The above group examined the whole question and made certain recommendations as contained in the minutes of the 3rd meeting of the group held on 27th April 1981 a copy of which is forwarded herewith. The recommendations of the above Committee have been examined in this Ministry and it has been decided to accept the recommendations of the Committee with the modification that projects costing upto and including Rs 25 lakhs shall not go to arbitration and only projects exceeding this amount shall go for arbitration. I am now to request that the State Govts. may please take necessary action to implement these recommendations for efficiency and uniformity.

A copy each of the following documents is enclosed :—

- (i) Minutes of the 3rd meeting of the Group of Engineer-Secretaries, Engineer-in-Chief & Chief Engineers for Arbitration System held on 27th April, 1981, at New Delhi.
- (ii) OM No. FA.IIM.14/78.31833 dated 30.10.78 issued by the Government of Orissa.
- (iii) Arbitration Tribunal Rules 1979 framed by the Government of Orissa.

ENCLOSURES TO LETTER NO : RW/NHIII/P/12/79 DT. 30.9.83

MINUTES OF THE THIRD MEETING OF THE GROUP OF ENGINEER-SECRETARIES, ENGINEER-IN-CHIEF & CHIEF ENGINEERS FOR ARBITRATION SYSTEM HELD ON 27TH APRIL, 1981 AT NEW DELHI.

The third meeting of the Group of Engineer-Secretaries, Engineer-in-Chief and Chief Engineer for recommending the most suitable system for arbitration in respect of disputes arising out of contracts for the construction of various road and bridge works was held on the 27th April, 1981 at New Delhi. The following were present :—

1. Shri A.C. Padhi, Engineer-in-Chief & Secretary, Works, Government of Orissa. Chairman.
 2. Shri Y.N. Narayana, Chief Engineer (NH) Karnataka.
 3. Shri D.V. Sahni, Chief Engineer, PWD, Punjab.
 4. Shri B. Panderang Rao, Asst. Legal Adviser, Ministry of Law, Government of India.
 5. Shri J.S. Marya, Director General (Road Development) & Additional Secretary, Ministry of Shipping and Transport (Roads Wing).
 6. Brig. Gobinder Singh, Addl. Director General (Roads), Ministry of Shipping and Transport (Roads Wing)
 7. Shri P.C. Bhasin, Addl. Director General (Bridges), Ministry of Shipping and Transport (Roads Wing)
 8. Shri S.P. Bhargava, Superintending Engineer, P.W.D., Rajasthan.
2. Convenor of the Group, Shri, A.C. Padhi, welcomed the members to the Third meeting and drew attention of the members to the gist of discussions held at the Chief Engineers meeting at Patna on the 1st January, 1981. Shri Padhi pointed out that the matter regarding setting up of an Arbitration Tribunal as established in Orissa was referred for advice to the Union Ministry of Law and it had been intimated by the Joint Secretary and Legal Adviser that Arbitration Tribunal is not a forum for arbitration recognised under the Indian Arbitration Act and hence it would not be legally in order to set up a forum other than that provided under the Arbitration Act. Shri Padhi further informed that the Arbitration Tribunal has been set up in Orissa after getting the concurrence of the State Law Department and stipulation about the reference of Contractors' Claims to the Arbitration Tribunal is being made in the Notice Inviting Tenders. Shri Padhi requested the representative of the Union Law Ministry to give his considered views in the matter.
 3. Shri Rao explained that under the Arbitration Act one or more arbitrators could be appointed with the consent of the concerned parties and hence if there is a suitable clause in the contract agreement (which has been accepted by the contractor) about the reference of disputed claims to the one or more Arbitrators, the same would be valid under the Arbitration Act. Shri Rao, however, pointed out that it would not be legal under the Arbitration Act to set up a Tribunal. Hence, according to him, where as three Arbitrators could be appointed, the word 'Tribunal' for carrying out functions of Arbitration should not be used.
 4. After detailed discussion about the prevalent practices for settlement of arbitration cases in C.P.W.D., PWD Maharashtra, Kar-

nataka. Rajasthan and Punjab it was finally agreed that the following recommendations may be made by the Group for further consideration of State PWD's/State Governments and Government of India.

- (1) A committee of three Arbitrators (on the pattern of Arbitration Tribunal established in Orissa) may be set up for expeditious settlement of the claims of contractors. The membership of the above committee could be on either of the following two patterns :
 - (a) One member from the Superior Judicial service (Senior Branch), one Member from the Civil Engineering Departments of the State PWD not below the rank of Superintending Engineer and one Member from the Finance Service not below the rank of a Superior Financial Service Class I. The Senior most member would act as the Chairman.
 - (b) All the three Members from the Civil Engineering Department of the State PWD not below the rank of Superintending Engineer. The Senior most Member would act as the Chairman.
- (2) A clear stipulation should be made in the notice Inviting Tenders regarding the reference of Contractors claims to the committee of three Arbitrators. The awards shall be speaking awards i.e. the Committee (Chairman) and the members shall assign reasons for all awards. Further no reference for arbitration shall be maintainable unless the contractors furnishes a security deposit of a sum determined according to the table stated in the agreement etc.
 (A copy of the Arbitration Tribunal rules, subsequent amendment and office memorandum issued by the Orissa works department is enclosed for reference).
- (3) The Committee of three Arbitrators shall have powers to hold Arbitration proceedings at stations considered most convenient by them for the particular parties involved for the early settlement of the claims.
- (4) The above mentioned Committee of three Arbitrators could be a full time organisation or a part-time one. In case the State Govt./State PWD decides to utilise the committee of three Arbitrators for all Engineering Departments in the State it could be a full time organisation or if the work load is not considered to be adequate, it could be a part time organisation.
- (5) Each of the State PWDs should have a properly staffed cell duly supported by competent, well qualified and experienced Legal Advisers, a Financial Adviser and experienced Civil Engineering fully conversant with the types of work being executed in the field of roads and bridges. This cell should preferably be working in the office of the Chief Engineer and should be kept abreast of various disputes/claims arising at different occasions during the currency of any contract. This cell should be entrusted with the preparation of defence for the arbitration proceedings and the case should be defended by the Civil Engineering in the cell duly assisted by the Legal Officer.
- (6) It should be worth while, as in the case of Haryana PWD to provide legal assistance to all Superintending Engineers in the different circles of the PWD who could help in preparation of defence initially and also advise upon suitable replies to be sent to the contracting agency in response to their letters for claims/disputes, etc.

*O.M. NO. FA. II M'14/78. 31833 DATED THE 30TH OCT. 1978
ISSUED BY THE GOVT. OF ORISSA, WORKS DEPARTMENT*

Subject : Amendments to clause 23 of F-2 Contract and Clause 19 of Lump-sum-Contract

Amendments to Clause 23 of the F-2 Contract and Clause 19 of the Lump-sum Contract were issued in this Department Office Memorandum No. 24944 dated 19.8.1978. But as per instructions subsequently issued in this Department letter No. 26523 dated 1.9.1978 implementation of the above amendments was deferred.

2. The question of prescribing the rate at which security deposit is required to be furnished by the Contractor involving arbitrator was under consideration of the Government. The scale of security deposit has now been finalised. Accordingly, in partial modification of this Department Office Memo No. 24944 dated 19.8.1978, the Governor has been pleased to make the following amendments to Clause 23 of the F-2 Contract and Clause 19 of the Lump-sum Contract.
3. Substitute the following in place of existing Clause 23 of F-2 Contract and Clause 19 of Lump-sum Contract each.

Except as otherwise provided in this Contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instruction hereinbefore mentioned and as to any other question, claim, right, matter or thing whatsoever, in any way arising out of or relating to the Contract, designs, drawings, specifications, estimates, instructions, orders of these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to arbitration by the Arbitration Tribunal, Bhubaneswar constituted by the State Government which shall consist of three members of whom one shall be chosen from among officers belonging to the Orissa Superior Judicial Service (Senior Branch), one from the Engineer in the active service of Government not below the rank of a Superintending Engineer, and the remaining member shall be chosen from officers belonging to the Orissa Finance Service not below the rank of Class-I officer.

The following are also the terms of this Contract, namely :—

- (a) No person other than the aforesaid Tribunal shall act as arbitrator and if for any reason that is not possible, the matter is not to be referred to arbitration at all;
- (b) the State Government may, at any time, effect any change in the personnel of the Tribunal and the new members or members appointed to the Tribunal shall be entitled to proceed with the reference from the stage at which it was left by his or their predecessor or predecessors, as the case may be;
- (c) the tribunal shall assign reasons for all awards;

- (d) the party invoking arbitration shall specify the dispute or disputes to be referred to arbitration under this Clause together with the amount or amounts claimed in respect of each such dispute,
- (e) where the party invoking arbitration is the contractor, no reference for arbitration shall be maintainable unless the contractor furnished a security deposit of a sum determined according to the table given below and the sum so deposited shall, on the termination of the arbitration proceedings, be adjusted against the cost, if any, awarded by the Tribunal against the party and the balance remaining after such adjustment or in the absence of any such cost being awarded, the whole of the sum shall be refunded to him within one month from the date of the award

Amount of claim	Rate of security deposit
For claims below Rs 10,000/-	3% of the amount claimed
For claims of Rs. 10,000/- and above	
below Rs 1,00,000/-	5% —do—
For claims of Rs 1,00,000/- and above.	10% —do—

- (f) if the contractor (s) does not make any demand for arbitration in respect of any claim (s) in writing within ninety days or receiving the intimation from Government that, the bill is ready for payment, the claim of the contractor (s) shall be deemed to have been waived and absolutely barred and the Government shall be discharged and released of all liabilities under the Contract in respect of such claim (s);
- (g) the Tribunal may, from time to time, with the consent of the parties, extend the time for making and publishing the award;
- (h) the Contractor shall not be entitled to invoke arbitration until and unless he has completed the work or until the Govt. have made alternative arrangements for completion of the work in question, as the case may be;
- (i) the tendency of arbitration proceedings shall not disentitle the Government to terminate the Contract and made alternative arrangements for the completion of the work; and
- (j) save as otherwise provided in this Contract the provisions of the Arbitration Act, 1940 and the rules made thereunder, for the time-being in force, shall apply to the arbitration proceedings under this clause.
4. These amendments shall take effect from the date of issue of this order.
5. These amendments have been concurred in by Law Department and Finance Department vide their U.O.No. 960/I dt. 4.4.1978 and U.O.R.No. 1320 EF-II dt. 22.4.1978 respectively.

O.M. DATED 18.5.79 ISSUED BY GOVT. OF ORISSA, WORKS DEPARTMENT.

Subject : Amendment to clause 23 of F-2 Contract and Clause 19 of lump-sum Contract

No. 15032-FA-IIM-33/79- The Governor has been pleased to make the following amendment to clause 23 of the F-2 Contract and clause 19 of the lump-sum Contract.

2. In sub-para (c) of clause 23 of F-2 Contract and clause 19 of lump-sum Contract at the end the following shall be added, namely -
- “In no case shall the Tribunal award interest in respect of any claim for any period prior to the date of the award as well as for the period from the date of the award till the date of the decree”.
3. This amendment shall take effect from the date of issue of this order.
4. The amendment has been concurred in by Law Department/Finance Department vide their U.O.R. No. 3399 L. dated the 7th December, 1978/No. 54 codes., dated the 3rd May 1979.

ARBITRATION TRIBUNAL RULES, 1979 FRAMED BY GOVT. OF ORISSA

1. (1) These rules may be called Arbitration Tribunal Rules, 1979.
 - (2) They shall come into force at once.
 2. These rules shall apply to all disputes arising out of Works/Supply Contracts relating to various Public Works Departments as well as other contracts with arbitration clauses, entered into by other Departments of the State Government after commencement of these Rules.
- Provided however that the disputes arising after the commencement of these Rules pertaining to contracts entered into prior to such date may also be referred to the Tribunal if both parties agree for such reference.
3. In these Rules, unless there is anything repugnant in the subject or context :—
 - (a) Government means Government of Orissa.
 - (b) Tribunal means the Arbitration Tribunal to be constituted by the State Government under the provision of Rule-4.
 - 4.1. There shall be an Arbitration Tribunal consisting of three serving members of the State Government.
 2. The members of the Tribunal shall be appointed by the Governor by nominating one member from the Orissa Superior Judicial Service (Senior Branch), another technical member from one of the State P.W.D. Departments not below the rank of

Superintending Engineer and the third member from Orissa Finance Service not below the rank of Superior Administrative Cadre in Class-I

- (3) The Government may at any time effect any change in the composition and personnel of the Tribunal and the new member/members appointed to the Tribunal shall be entitled to proceed with the reference from the stage at which it was left by his/their predecessors as the case may be.
5. The term of a member shall ordinarily be three years unless otherwise directed by Government in this regard.
6. The member from the Orissa Superior Judicial Service, Senior Branch shall act as the Chairman of the Tribunal.
7. Unless otherwise directed by the State Government the headquarters of the Tribunal shall be at Bhubaneswar provided, however, that the Tribunal may hold its sittings at any other place having regard to the convenience of the parties concerned.
8. The Tribunal may require attendance of parties, collect evidence and make spot inspection in course of proceedings.
9. It shall be competent for the Tribunal to secure the advice of experts of appropriate rank on various technical issues which it is called upon to decide in course of a proceeding.
10. In any proceeding before the Tribunal the case may be represented by the party himself or through his duly authorised representative (s).
11. The party invoking arbitration, shall specify the dispute to be referred to the Arbitration together with amounts claimed in respect of each such dispute.
12. The Tribunal will not entertain any claim if the contractor does not make any demand for Arbitration in writing within 90 days of receiving the intimation from the Government that the bill is ready for payment.
13. (1) No reference for arbitration shall be maintainable unless the contractor furnished a security deposit as prescribed in the Agreement. The sums so deposited shall on the termination of the arbitration proceeding be adjusted against the cost if any awarded by the Tribunal against the contractor and the balance remaining after such adjustment, or in the absence of any such cost being awarded, the whole of the sum shall be refunded to him within one month from the date of the award provided, however, that when the Government makes the reference for arbitration, no security deposit shall be required to be furnished.
- (2) The security deposit, as required should be credited to government account in chalan under the head "0-65-other Administrative services-(C) other Services-(C) Other receipts" and the duly receipted chalan should be presented along with the claim before the Tribunal.
14. The Tribunal shall make an award within a period of 120 days from the date of reference. It shall however be competent to extend the period of making award from time to time with the consent of the parties to the proceeding.
15. The Chairman and the members shall assign reasons for every award of the Tribunal. Failure to do so shall amount to breach of duty and may entail disciplinary proceedings.
16. (1) The amount of the award given by the Tribunal shall be to the nearest rupee.
- (2) The award amount shall be paid by the concerned parties within a period of 120 days of receipt of the notice of such award by the party.
Provided that if this amount is not paid within the stipulated period the Tribunal shall have power to direct payment of interest on the principal amount of award.
17. Save as otherwise provided in the Arbitration contract the provision of Arbitration Act, 1940 shall apply to the arbitration proceedings. The decision of the Tribunal shall be final, conclusive and binding on all parties to the contract.
18. The Tribunal shall submit to the State Government a return once in a quarter stating therein the number of cases pending before them the age of the cases, and the approximate time for disposal of the pending cases.
19. The Tribunal will function under the Administrative control of the Irrigation and Power Department.

130.18

No. RW/NHIII/P/22/83.

Dated the 28th Dec. 1983.

To

1. The Secretaries of all State Governments and Union Territories,
(Deptt. dealing with National Highways)
2. The Chief Engineers of PWDs of all States,
(Deptt. dealing with National Highways).

Subject : Model Contract document for lumpsum contract for highway bridges

On the recommendations of the All India Chief Engineer's Conference (held at Bhubaneswar in May 1969), a Committee of the State Chief Engineer under the Chairmanship of the Addl. Director General (Bridges) was set up for evolving standard model contract document for the execution of Centrally financed road and bridge works in the country, so as to have uniformity in practice in different State PWDs who are the executing agencies for all these works and to improve upon as far as

possible, the existing deficiencies in the State PWD contract documents. Besides some officers of the Roads Wing, the Committee included the Chief Engineers of Tamil Nadu, Himachal Pradesh, Maharashtra, U.P. and Bihar as also a representative each of the Directorate General, Border Roads and the Director General, Works, CPWD.

The Committee evolved two separate model documents — one for lumpsum contract and the other for item rate contract for road and bridge works. These documents were sent to the Ministry of Finance and Min. of Law for their comments. The Ministry of Finance referred the matter to the Accountant General, C.W. & Misc., who offered comments on some of the clauses of the document relating to lumpsum bridge contract.

2. In order to facilitate early finalisation of the Model contract document, the comments of Accountant General C.W. & Misc. were discussed and considered in several meetings of all the members of the Committee as also representatives of the Ministries of Law and Finance, Comptroller & Auditor General and Accountant General, C.W. & Misc. A copy of the "Model contract document for lumpsum contract for highway bridges" as finalised is enclosed herewith for guidance.

Note : (Enclosures not printed as the same have been printed separately)

130.19

No. RW/NH.III/P/3/84

Dated the 11th July, 1984

To

All Secretaries, Public Works Department of State Governments

Subject : Credit of sale proceeds of tender forms to the revenue of the State Governments

I am directed to say that during the internal test check of a National Highway Division it was found that the expenditure on account of printing of tender forms, cost of paper etc. was initially met by the Central Government in as much as the same was charged to National Highway works. Despite this, the amount realised on account of sale of tender forms etc. was credited to the State Head of Account. This position is anomalous.

2. This Ministry has no objection to the crediting of the sale proceeds of tender forms etc. to the State Head of Account but in that case the cost of tender forms etc. including the expenses on publicity of tenders should be met by the State Governments concerned. It is therefore suggested that in future the cost of printing of tender forms including cost of paper, printing and publicity etc. may be met by the State Government concerned and the sale proceeds of tender forms may be appropriated by the State Government. This procedure may please be followed strictly in future.

130.20

No. NH. III/P/4/82

Dated the 11th July, 1984

To

1. The Secretary, Public Works Departments and Chief Engineers of State Public Works Departments & Union Territories dealing with National Highways & other Centrally Financed Roads.
2. Director General (Works), C.P.W.D., New Delhi.
3. Director General (Border Roads), Kashmir House, New Delhi.

Subject : Pre-qualifications of tenderers for the execution of major road and bridge works on National Highways and under other Centrally Financed Schemes

As is well-known, for major road and bridge works it is of paramount importance to pre-qualify the tenderers so as to select a suitable contracting agency for smooth and successful completion of such works. Keeping in view the present-day sophistication in the methods of design and construction and the need for special and adequate technical know-how and expertise in the execution of major highway projects, the need for pre-qualification of tenderers has been felt all-round. The matter relating to pre-qualification of tenderers for the execution of major bridge works was discussed in the Chief Engineers' meeting held at Bhubaneswar on the 29th December, 1982.

2. In order to ensure that a uniform policy is adopted in the procedure relating to pre-qualification of tenderers for major highway projects, detailed guidelines have been drawn up by the Ministry and a

copy of the same is enclosed herewith. It is requested that the above mentioned guidelines may kindly be followed for the pre-qualification of tenderers for the execution of major road and bridge works on National Highways and under other Centrally Financed Schemes.

3. This supersedes Ministry's Circular letter No. NH. VI-50(3)/83 dated the 10th March, 1983.

Enclosure to letter No. NH.III/P/4/82 dated 11.7.84

DETAILED GUIDELINES FOR PRE-QUALIFICATION OF TENDERERS FOR THE EXECUTION OF MAJOR ROAD AND BRIDGE WORKS ON NATIONAL HIGHWAYS AND UNDER OTHER CENTRALLY FINANCED SCHEMES

1. Conditions for Pre-qualification

Pre-qualification of tenderers shall be resorted to under any one or more of the following circumstances :—

- 1.1 When the continuous stretch of road length (where the development work is to be carried out) is more than 5 kms or when the cost of the project (work portion only excluding centages) is more than Rs. 100 lakhs.
- 1.2 When the overall length of the bridge (between the faces of the abutments) is more than 200 metres or when the total cost of the bridge work (excluding centages) is more than Rs 100 lakhs.
- 1.3 When a highly specialised technique (such as mechanised construction of asphaltic concrete pavement or construction of soil stabilized road) is going to be adopted for the construction of a new road or improvement of an existing road.
- 1.4 When the bridge structure is of special type requiring high degree of precision, specialised technique and equipment which are not likely to be available with all the contractors.
- 1.5 Major highway projects such as Expressway requiring high degree of precision in execution.
- 1.6 When the Project is of extreme urgency and requires to be executed within a tight time schedule.

2. Procedure for Pre-qualification .

- 2.1 Application for pre-qualification of tenderers shall be invited from intending tenderers by publishing notices in the newspapers/Trade Journals (at least four such publications) being published from the State Capitals or the metropolitan cities of Delhi/New Delhi, Bombay, Calcutta, and Madras. Selection may then be made from the applications so received for issue of tender papers to suitable agencies. The number of tenderers so selected for issue of tender papers shall not be less than six whenever the number of applications received exceeds six. Selection shall not be limited to local contractors only but reputed specialised firms located in other parts of the country shall also have to be considered. However, when the number of applications received is less than four and also reputed firms have not come forward, the procedure outlined in para 2.3 below shall be followed or consultations shall be made with the Ministry of Shipping & Transport (Roads Wing).
- 2.2 Since the final selection of the contractors will be made on the basis of their past record of proven technical competence and experience of handling similar works in the past, their expertise and technical know-how for the job in question, their physical capacity to handle new works keeping in view their existing commitments, their financial resources, construction equipments available with them etc., the details regarding the following shall be called for from them while inviting applications :—
 - (i) Their technical competence and experience of handling highway works in the past.
 - (ii) Works in hand with the present stage of progress including the names and addresses of the organisations or authorities for whom the works are being executed.
 - (iii) The list of major projects executed/under execution indicating the organisations/authorities for whom the work had been/is being executed, brief details of the projects completed/in hand and also giving date of commencement, original date of completion, date of final completion, original tender cost, final completion cost.
 - (iv) Construction equipments and qualified technical personnel available with the contractors and the consultants proposed to be employed on the works.
 - (v) Financial resources including bank credits and other facilities available with the contractors.
 - (vi) Particulars of registration with Central or State Government organisations.
 - (vii) Whether the contractor has been black-listed at any time by any Central or State agency.

A sample Questionnaire for the purpose of prequalification is attached as Annexure I.

- 2.3 Sometimes when it is not possible to issue a press notification for pre-qualification (for example in case of strategic works) selection may be made from the contractors already registered with the Central or State Government Departments and tender papers issued to the selected few. However, in order to generate a fair competition the number of contractors so selected shall not be less than four. Further more, the selection shall not be limited to local contractors only but the reputed specialized firms located in other parts of the country shall also be considered.
- 2.4 The final decision regarding the tenderers to be prequalified shall be taken by the State Government keeping in view the guidelines mentioned above. In case of any doubt, the State Government can consult the Ministry of Shipping & Transport (Roads Wing) before issuing tender papers for works on National Highways and under other Centrally Financed Schemes.

QUESTIONNAIRE TO BE SUBMITTED ALONGWITH APPLICATION FOR PRE-QUALIFICATION**PART-I Experience/Past Performance Record :**

Sl. No	Question	Reply
1.	How many years has your organisation been in business as a Contractor under your present business name?	
2.	How many years experience, in Construction works has your Organisation had?	
	(a) As a General Contractor :	
	(b) As a Sub-Contractor :	
3.	What is the Construction experience of the Principal individuals of your Organisation?	

Individual's name	Present position of Office	Years of construction experience	Years with firm	Magnitude & type of work	In what capacity
--------------------------	-----------------------------------	---	------------------------	-------------------------------------	-------------------------

4. Have you ever failed to complete any work awarded to you?
If so, where and why?

5. Performance record for the past 5 years (list all contracts Completed by your Organisation during the past 5 years) uncompleted contracts are to be shown against S. No. 7

Name of owner i.e. individual and of each partner of project of the contracting firm.	Name & location kind of work	Name of Engineer-in-Chief with educational qualifications	Contract price	Was contract completed within time? ("Yes" or "No"?). If "No" explain why, under Question No. 7	Were there any penalties/compensation/liquidated damages imposed? ("Yes" or "No"?). (If "Yes" give amount and explain under Question No. 7).	Were there any fines, claims, of stop notices filed against the employer? ("Yes" or "No"?). (If "Yes" explain under Question No. 7).
--	---	--	-----------------------	--	---	---

Note : Certificates from the head of the Organisation/Department/Project in support of the satisfactory completion of the projects within the stipulated time should be attached.

6. Give full information about all of your contracts whether primary or Sub-contracts, whether in progress or awarded but not yet begun : or where you are low bidder pending formal award of contract.

Owner/Client	Location	Description	Contract Amount	Cost of work completed & billed.	Percentage of physical completion	Scheduled date of completion	Expected date of completion
---------------------	-----------------	--------------------	------------------------	---	--	-------------------------------------	------------------------------------

7. Explanation of details in connection with non-completion of Contracts, penalties imposed, labour trouble experienced, claims and stop notices filed against contracts listed under SL No. 5 :

PART II- Plant and Equipment :

- Do you have the experience of undertaking works similar to the proposed one? Explain in details.
- Name and Nationality of the Principal Supervisor of the work, when awarded to you;
List the names and nationalities of key personnel who will be assigned to this work :

3. Do you intend to Sub-Contract any portion of the work?

If so, state the nature of work (s) to be done by Sub-Contractor (s), and if known, give the name (s) and address (es) of the Sub-Contractor (s), amount and the type of the equipment, and his (their) financial responsibility.

4. What equipments do you own that is considered suitable and available for the proposed work?

Quantity	Item	Description, Size, Capacity etc.	Condition	Age (Giving year of purchase and number of hours utilised)	Present location
5. What equipment do you intend to purchase for use on the proposed work, should the contract be awarded to you?					
Quantity	Item	Description, size, capacity etc.	Condition*	Age* (Giving year of manufacture and no. of hours used.)	Present Location.

*For Second hand equipment.

6. Do you propose to hire any equipment for this work?

If so, state type, quantity and reason for hiring :

PART III-General

- Whether the firm is a Private or Public Ltd. concern or undivided Hindu family individual or a Registered Partnership firm? (attested copies of Deeds or Articles of Association to be enclosed).
- Name of the person holding the Power of Attorney, and his present Nationality with their liabilities? (attested copy of the Partnership deed to be enclosed).
- Name of the Partners, their present nationality with their liabilities. (attested copy of Partnership deed to be enclosed).
- Whether the applicant or any of his partners or Shareholders is/are dismissed Government servant (s)?
- Whether the applicant has under his employment a dismissed Government Servant (s)?
- Has the applicant or any of his partners been blacklisted or removed from the Approved list of Contractors or demoted to lower class etc.?

130.22

No. NHIII/P/4/82

Dated the 10th May, 1985

OFFICE MEMORANDUM

Subject : Intimation to State P.W.Ds. regarding advance action for pre-qualification of tenderers for major road and bridge works

This Ministry has issued detailed guidelines for prequalification of tenderers for execution of major Road and Bridge works on National Highways and under other Centrally Financed Schemes vide circular letter No. NHIII/P/4/82 dated the 11th July 1984. Instructions also have been issued to all States and Union Territories vide letter No. NHIII/P/25/84 dated 4th August, 1984 for not resorting to splitting of the works for ensuring good quality during execution.

- Prequalification of tenderers in case of major and specialised works as mentioned in the conditions in the Ministry's circular of even number dated 11th July 1984 (Extract given in the Annexure) is essential to ensure timely execution of the works with proper quality control. A suitable para regarding requirement of pre-qualification of tenderers in respect of such projects, shall be incorporated henceforth in the technical Note to be issued with the sanction letter. All concerned technical officers in the Ministry may please note for necessary compliance.
- The process of pre-qualification of tenderers requires certain minimum time to complete the formalities and if the same is started after issue of financial sanction to the work, it may delay the start of the work. This period could be curtailed by sending advance intimation to the Public Works Departments soon after the estimates are processed in the Ministry and projected to Finance. The officers dealing with the projects henceforth may take suitable action (by sending advance copies of Technical Notes for major works, preferably with a D.O. letter to the State Chief Engineer) to enable them to complete the pre-qualification process well in time and call tenders soon after the sanctions are issued by this Ministry.

To

All Officers, Executive Engineers and above in the Roads Wing.

Enclosure to letter No. NHIII/P/4/82 dated 10.5.85.

EXTRACTS FROM THE ENCLOSURE TO LETTER No. NHIII/P/4/82 DATED 11.7.84

1. *Conditions for Pre-qualification :*

Pre-qualification of tenderers shall be resorted to under any one or more of the following circumstances :—

- 1.1 When the continuous stretch of road length (where the development work is to be carried out) is more than 5 kms or when the cost of the project (work portion only excluding centages) is more than Rs 100 lakhs.
- 1.2 When the overall length of the bridge (between the faces of the abutments) is more than 200 metres or when the total cost of the bridge work (excluding centages) is more than Rs 100 lakhs.
- 1.3 When a highly specialised technique (such as mechanised construction of asphaltic concrete pavement or construction of soil stabilized road) is going to be adopted for the construction of a new road or improvement of an existing road.
- 1.4 When the bridge structure is of special type requiring high degree of precision, specialised technique and equipment which are not likely to be available with all the contractors.
- 1.5 Major highway projects such as Expressway requiring high degree of precision in execution.
- 1.6 When the Project is of extreme urgency and requires to be executed within a tight time schedule.

130.23

No. RW/NHVI-50 (3)/83

Dated the 15th July, 1985.

To

- (1) Secretaries of Public Works Departments and Chief Engineers of State Public Works Departments and Union Territories dealing with National Highways and other Centrally financed Roads.
- (2) Director General (Works), Central P.W.D., New Delhi
- (3) Director General (Border Roads), New Delhi

Subject :Execution of bridge works on National Highways and under other Centrally Financed Schemes—Restricting the practice of inviting lumpsum tenders on the basis of alternative designs

It has come to the notice of the Ministry that for a large number of bridge works on National Highways and under other Centrally Financed Schemes, the practice of inviting tenders on the basis of alternative designs (which are materially different from the departmental designs put to tender) is being resorted to. In this connection, your kind attention is invited to the contents of para 4 of Appendix II enclosed with the Ministry's Circular letter No. NHI-37 (2)/70 dated the 2nd April, 1970, which is reproduced hereunder for ready reference :—

"In respect of bridges with individual span lengths of 25 metres (80 feet) or less and overall length of the bridge not more than 5 spans of 25 metres (or 400 feet length approximately) tenders will have to be only on item rate basis on departmental designs as per decision arrived at in the Chief Engineers' meeting held in October, 1969 at Kulu. Hence, for such bridges, apart from detailed estimates, detailed designs will also have to be submitted alongwith the estimate. As standard designs of superstructures of various span lengths prepared in this Ministry are available with State Chief Engineers, these may be adopted as far as possible.

For further facility of reference, relevant extracts from the summary record of the meeting of Chief Engineers held at Kulu on the 11th October, 1969 (as mentioned in the above para) is also enclosed herewith.

2. It appears that the above mentioned guidelines are not being followed in toto. It may be mentioned here that in quite a number of bridge works, our experience with lumpsum tenders based on alternative designs of contractors has not been too happy to allow us to continue the practice of resorting to such type of tenders in an unrestricted fashion. There have been many instances where we had to incur time and cost over-runs because the concerned bridge works were allotted on the basis of lumpsum tenders involving alternative designs. Keeping in view the difficulties being experienced by various State PWDs as well as this Ministry in conveying expeditious approval of detailed working drawings for different components of bridges (which are let out to be constructed as per alternative designs of contractor), it has been decided that the instructions reproduced in para 1 above shall be followed invariably in future for all Centrally financed bridge works. It is reiterated that for bridges of overall length not more than 125 metres (or individual span length of 25 metres or less) lumpsum ten-

- 1.1 When the continuous stretch of road length (where the development work is to be carried out) is more than 5 kms or when tenders based on alternative designs shall not be invited. A few situations where exceptions to the above mentioned procedure could be made are indicated hereunder :—
 - (i) Where the bridge structure is of a complicated nature, as for example, a bridge involving exceptional foundation problems;
 - (ii) skew bridges (the angle of skew being more than 15°) or bridges having curved alignment in plan for the superstructure of which no standard designs/drawings are available so far; and
 - (iii) where the bridge work is of extreme urgency and requires to be executed on top priority basis in situations such as washing away/failure of an existing bridge.
3. Your kind attention is again drawn towards our earlier guidelines (reproduced in para 1 above) wherein it is mentioned that detailed designs alongwith detailed working drawings would have to be submitted alongwith the detailed estimates. However, it may please be noted that these designs and drawings would be required mostly for open/well foundations, R.C.C. box structures, abutments/piers, well cap/pier cap/abutment cap, wing return walls and bearings. If some State P.W.D. does not happen to have a fully equipped Design Cell, there should not be any difficulty in arranging the services of a Consultant.
4. It is further pointed out that as per modified procedure for submission of detailed estimates for bridge projects costing more than Rs. 10 lakhs each (as contained in our letter No. NHIII/P/31/77 dated 10.1.85) the State PWDs are required to furnish a Technical Appraisal Note (containing all relevant technical details) in the first instance concerning each bridge work for obtaining Ministry's prior approval (for all the requisite technical parameters) before preparing the detailed estimate. It may kindly be ensured that if the State PWD contemplates to invite tenders for a certain bridge work without conforming fully with the guidelines mentioned in paras 1 & 2 above, their proposal (alongwith full justification) should be clearly mentioned at the time of furnishing the Technical Appraisal Note so as to enable the Ministry to consider the matter in all its aspects.
5. It is requested that suitable instructions may kindly be issued to all concerned for complying with the guidelines given in the preceding paragraphs.

Enclosure to letter No. RW/NHVI-50 (3)/83 dated 15.7.85

EXTRACT FROM THE SUMMARY RECORD OF THE MEETING OF CHIEF ENGINEERS HELD AT KULU ON THE 11TH OCT. 1969

ITEM No. 7 : Avoiding delays in execution of bridge works by adopting Standard designs for bridges, wherever feasible, and also by limiting the scope of alternative designs for bridges more than 500 ft. in length

Shri Kartik Prasad (Roads Wing) explained that as indicated in the memorandum on the subject, experience had shown that the system of inviting tenders on lumpsum basis for all types of bridges had not proved very satisfactory, particularly in regard to small bridges and the matter therefore required consideration. In actual practice it had been found that after a contract had been finalised, several changes had to be made in the design received on the basis of a lumpsum tender. He felt that lumpsum contracts could be executed efficiently if the details had been meticulously worked out beforehand so as to require no subsequent changes. He felt that unless this was done the lumpsum tendering was not a feasible proposition. In many cases where lumpsum tenders were invited based on alternative designs, not only completion of the work got delayed considerably but the cost of the work also rose sufficiently higher than the tendered costs.

The Director General (Road Development) felt that in the case of lumpsum contracts, the contractors were generally in the habit of giving certain specific clauses requiring negotiation. Of these, certain are withdrawn subsequently but certain clauses, which have adverse effect on the contract and are difficult to be evaluated, stay. Thus, the alternatives have to be gone into. Once a lumpsum contract was accepted, the person who quotes has the choice. The bridge code itself is flexible and it gives an opportunity to the tenderers to reward their tender.

Shri Kartik Prasad (Roads Wing) felt that the basic issue was whether the lumpsum tendering should be limited to only large bridges or for all bridges. He felt that while it was alright to go in for lumpsum tendering in the case of large bridges which provided enough scope for alternative designs, in the case of smaller bridges limited upto certain specified lengths, say 500 ft. economic and comparative rates could be possible, if item rate tenders were invited for which standard designs could be evolved and followed.

The Chief Engineer, Orissa felt that instead of 500 ft. bridges which were rather large structures, it might be desirable to make a beginning with standard designs in the case of bridges with 50 ft. 100 ft. lengths on item rate basis.

The representative of Bihar (Shri Das Gupta) suggested that 250 ft. length might be the limiting factor.

The Director General (Road Development) suggested that the scope of alternative designs might be limited to bridges with 5 spans say of 80 ft./25 metres length. The idea was that if there were bridges with smaller spans, there would be large number of prospective tenderers to give alternative designs which enlarged the field of competition and afforded the chance of economic design.

141 LAND ACQUISITION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>141.1.</u> 121.3.	IDA/W-20 (21)/63 dt. 17.7.65	Acquisition of Land Required for NHs & Other Roads Financed from the Central Funds	141/1
141.2.	NHII-39 (99)/72 dt. 21.1.76	Procedure to Deal with the Claims of the State Govts. for Payment to them of the Cost of State Lands to be taken over for the Improvement of Existing N.Hs/ Conversion of Existing S.Hs into National Highways	141/1
141.3.	NHIII/P/10/76 dt. 4.11.77	NHs-Acquisition of Lands for National Highways-Registration of their Title, in the Name of Central Govt.	141/2
141.4.	NHIII/P/43/82 dt. 7.8.82	Need to Limit Acquisition of land to the Minimum Necessary Area	141/2
<u>141.5.</u> 121.2.	RW/NHIII/Coord/37/84 dt. 5.4.84	Recommendations of Vohra Committee-Prior Sanction for Land Acquisition Estimates	141/3
141.6.	RW/NHIII/P/43/82 dt. 12.11.84	Need to Limit Acquisition of Land to the Minimum Possible Extent	141/4
141.7.	NHIII/P/28/84 dt. 16.11.84	Posting of Land Acquisition Officers with the SEs dealing with National Highways and other Centrally Sponsored Works.	141/4

credited to the Forest Deptt. I am not certain about the practice in regard to the value of the land itself. This may vary from State to State. At any rate, this is not likely to be very large and should not, therefore, be allowed to stand in the way of arriving at a satisfactory settlement between the States and the Centre.

EXTRACT OF THE NOTES OF SECRETARY (FINANCE)

While agreeing generally with the Transport Secretary's observations, I would suggest that no exception need be made for forest lands. The liability for compensating any commercial organisation of the State Govt. should rest with the State and not be undertaken by the Centre.

141.3

No. NHIII/P/10/76

Dated the 4th Nov., 1977

To

The Secretary All State Govts.
(Deptts. dealing with National Highways).

Subject : National Highways—Acquisition of lands for National Highways—Registration of their title, in the name of Central Government

In supersession of this Ministry's circular letter No. NHII/P/10/76 dated 2nd August, 1977 I am directed to say that according to Section 4 of the National Highways Act, 1956 all National Highways vest in the Union of India and therefore, the ownership of all the National Highways, including all lands acquired for the development of National Highways vests in the name of the Government of India. It is therefore appropriate that the title of all such lands should be registered in the name of the Central Government. It has been reported in this connection by some of our Regional Officers/Engineer Liaison Officers that the practice of registering the title of lands acquired for the Central Government for National Highway purposes is not being uniformly followed by some of the State Governments. I am, therefore, to request you kindly to ensure that the title of all lands already acquired or as may be acquired for this Ministry in future for National Highway purposes, is invariably registered in the name of the Central Government. It will go a long way to ensure implementation of this requirement if suitable instructions are issued by the State Governments to the State Revenue Authorities concerned with the actual acquisition of such lands.

141.4

No. NHIII/P/43/82

Dated the 7th Aug., 1982

To

All State Chief Engineers
(dealing with National Highways)

Subject : Need to limit acquisition of land to the minimum necessary area

I am directed to forward herewith a copy of D.O. letter No. 22011/29/2/82-LRD dated 18.6.82 (Appendix-I) from Shri S.C. Verma, Secretary (RD), Ministry of Rural Development, Krishi Bhavan, New Delhi addressed to Shri Mohinder Singh, Secretary, Ministry of Shipping and Transport, Transport Bhavan, New Delhi on the subject mentioned above for your guidance and necessary action.

2. The Standards for the width of land to be acquired for various categories of highways have already been laid down by the Indian Roads Congress and the lands are to be normally acquired as per these Standards. With a view to conserving useful lands especially in agricultural and urban fringe areas, utmost restraint may be exercised in land acquisition so that only land as is necessary for a highway project is actually acquired.

3. The contents of this letter may be brought to the notice of all concerned.

Enclosure to letter No. NHIII/P/43/82 dt. the 7th August 1982

APPENDIX I

LETTER NO. 22011/29/2/82-LRD, DATED 18.6.82 FROM SECRETARY (RD), MINISTRY OF RURAL DEVELOPMENT, KRISHI BHAVAN, NEW DELHI ADDRESSED TO THE SECRETARY, MINISTRY OF SHIPPING AND TRANSPORT, TRANSPORT BHAVAN, NEW DELHI

It has been brought to the notice of the Prime Minister that, in a number of cases, land has been acquired for public purposes in a liberal scale and far in excess of actual requirement, thereby causing avoidable hardship to a number of landowners. The Prime Minister has expressed grave concern over this development and has desired that to acquisition of land for public purposes should be

No. IDA/W-20 (21)/63

Dated the 17th July, 1965

To

All State Governments
(Departments dealing with roads)

Subject : Acquisition of land required for National Highways and other roads financed from the Central funds

I am directed to say that the question regarding various items to be included in land acquisition estimates relating to the National Highways and other roads financed partly or fully from the funds provided by this Ministry has been under consideration by the Government of India and it has been decided that such estimates should provide for the following items :

- (i) Likely expenditure on actual demarcation, measurements and other field work including preparation of working drawings.
 - (ii) Estimated amount of compensation for land and property thereon which is payable to the owners of land and property. The prevailing rates for compensation payable to land/property owners are broadly ascertained initially by the Executive Engineers from the Collectors of the Districts.
 - (iii) Reasonable provision for work-charged establishments and contingencies which may be 2% and 3% of the amount of (i) & (ii) above. The provision for work-charged establishment is intended to cover the expenditure involved on the engagement of supervisory staff for demarcation, measurements and other field work including preparation of working drawings. The provision for contingencies is intended for meeting possible variations in the acquisition awards given by the Revenue authorities and the estimated amount of compensation and for departures in respect of the measurement work.
 - (iv) 7½% agency charges on (i), (ii) and (iii) above — This is intended to include the departmental charges paid in the District Revenue offices and other secretariat work.
2. I am to add that estimates for compensation referred to at item (ii) above are specifically meant to cover actual compensation and should not include any provision for the Revenue and other regular establishment employed on land acquisition.
 3. I am to request that in future all land acquisition estimates relating to National Highways and other roads financed partly or fully from the funds provided by this Ministry should be prepared on the above lines. Such estimates should also be accompanied by certificate to the effect that no provision is included in item (ii) above for meeting expenditure on establishment of the Revenue and other Departments of the State Government.

141.2

No. NHII-39 (99)/72

Dated the 21st Jan., 1976

Subject : Procedure to deal with the claims of the State Govts. for payment to them of the cost of State lands to be taken over for the improvements of existing N.Hs/conversion of existing State Highways into N.Hs.

The question of dealing with the claims of the State Govts. for payment to them of the cost of the State lands taken over/to be taken over for the improvement of an existing N.H. or the conversion of an existing State Highway into a National Highway has been under consideration in this Ministry for the past several years. It has been decided to deal with such claims in the manner as indicated in the extracts of the notes of the Secretary (Transport) and the Secretary (Finance E), reproduced below.

To

All Technical Officers of the level of the S. Es and above/US (B), US (NH)B/US (NH) A. Regional Officers/Engineer Liaison Officers of all States and NHII

EXTRACTS OF THE NOTES OF SECRETARY (TRANSPORT)

For the future we may lay down that before we sanction the improvement of an existing N.H. or the conversion of an existing State Highway into a N.H., the State Govt. concerned should give an undertaking that any Govt. lands required for the purpose of the proper maintenance and improvement of the N.H. concerned should be transferred to the Central Govt. free of cost. As regards private lands acquired for this purpose we are even now bearing the necessary charges and this should presently continue. Once the undertaking of the kind referred to above is given by the State Govts prior to the sanctioning of a work, we will have effectively put an end to controversies of this kind. The States are vitally interested in improving or adding to the NHs and it should be easy for them to accept the kind of undertaking. One exception may, however, arise; when according to the State Govt's own practice in regard to State Highways some lands particularly belonging to the commercial Deptts. like Forests are acquired debits are raised against the Highway project towards the value of the land, we will have to agree to follow similar practice. In regard to Forest lands, it is well-known that the trees and other growth over the ground are separately valued and the amounts realised through their disposal are

limited to the minimum area absolutely necessary. I am enclosing herewith a copy of a letter dated the 5th March, 1982 to Chief Secretaries of all State Governments, suggesting that utmost restraint should be exercised in acquiring land. Since quite some acquisition takes place at the instance of Central Ministries, similar restraint should also be exercised by them and by organizations and public sector units under their control.

The Prime Minister has further desired that, in such cases, efforts should also be made to find employment for persons displaced from land as a result of acquisition. A review Committee, which had been appointed by Government of India in 1967, to examine, among other things, the question of Government's responsibility to rehabilitate the persons displaced as a result of acquisition, suggested that Government should accept social and moral responsibility for rehabilitation of such persons. The Committee had suggested that such persons should be given preferential treatment in the matter of employment opportunities in the project for which the land was acquired. It further suggested that other measures of rehabilitation including imparting of new skills to persons affected by the project should be taken up. The recommendations of the Committee were brought to the notice of all Ministries and Departments of the Union Government in November, 1972.

I will be grateful if this suggestion is kept in view in cases where large scale acquisition of land takes place at the instance of Central Ministries or of organisations and public sector units under their control.

LETTER NO. 22011/29/2/82-LRD, DATED 5.3.82 FROM THE MINISTRY OF RURAL DEVELOPMENT NEW DELHI
ADDRESSED TO THE CHIEF SECRETARIES OF ALL UNION TERRITORY ADMINISTRATIONS AND OTHERS.

Subject :— Need to limit acquisition of land to the minimum necessary area

I am directed to say that the Prime Minister has recently expressed concern over reports of acquisition of land in excess of requirement and observed that acquisition should be limited to the area absolutely necessary.

2. While it is inevitable that the State's need for land will increase with enlargement in its development functions, it is necessary that utmost restraint is exercised in acquisition. As a matter of fact, the growing need of the State for land should inspire an attitude of acquiring only so much land as is absolutely necessary for the project. There can be no doubt that acquisition causes hardship to landowners, especially those with small holdings, and the hardship is not always mitigated by payment of compensation to the owner. That apart, the land acquired in excess of requirement represents an avoidable waste of the State's scarce resources. As is well known, the availability of land particularly of good agricultural land, is limited. The net sown area has, subject to marginal fluctuations, remained fixed at about 140 million hectares throughout the last decade. In the meantime, increases in both the overall population and the rural population have been significant, leading to much larger demand for agricultural products and for land-based employment. It will obviously be in the public interest to conserve as much land as possible for agricultural production and not to permit its diversion to a non-agricultural purpose except when such diversion subserves an important public purpose. Even then, the diversion should be limited to the minimum.
3. It is suggested that the State Government may consider issuing suitable instructions along these lines to all concerned, enjoining upon them the need for very careful examination both of the proposal for acquisition and the area proposed for acquisition.

141.5
121.2

No. RW/NHIII/COORD/37/84

Dated the 5th April, 1984

To

The Secretaries of all State Governments,
(Department dealing with roads)

Subject : Recommendations of Vohra Committee—Prior sanction for Land Acquisition Estimates

I am directed to say that the Vohra Committee on National Highway Agency System had, *inter alia*, recommended that the sanction of work should be given only after complete land acquisition has taken place at least over such a section which on completion would be used by traffic. This Committee accordingly suggested that this can be achieved only by a separate land acquisition estimates to be prepared and sanctioned well in advance of the estimates for the work component.

2. I am accordingly to request that the State Governments may expedite land acquisition proceedings for all such cases where estimates have already been sanctioned by this Ministry and prepare separate land acquisition estimate for sanction of this Ministry for all such projects which are expected to be taken in the near future. It may be mentioned that no project estimate will be sanctioned by this Ministry until and unless land acquisition estimate is sanctioned and land acquired for the purpose.

No. RW/NH III/P/43/82

Dated the 12th Nov., 1984

To

All State Chief Engineers (dealing with National Highways)

Subject : Need to limit acquisition of land to the minimum possible extent

I am directed to forward herewith a copy of this Ministry's communication No. CDN/CCP-5/84 dated the 19th Oct. 1984 containing the observations of the Prime Minister on the acquisition of land. The land if acquired in excess of requirements, leads to undesirable consequences like uprooting of large number of farmers who are rendered homeless and jobless etc.

2. As already brought out in this Ministry's circular of even number dated 7.8.82 the standards for the width of the land to be acquired for various categories of highways have already been laid down by the Indian Roads Congress and the land to be normally acquired shall be in conformity with these Standards. With a view to conserving useful lands especially in agricultural and urban fringe areas, utmost restraint may be exercised in land acquisition so that only land as is necessary for a highway project is actually acquired. It is also necessary to adopt modern methods to maximise the utilisation of the land available.
3. The contents of this letter may be brought to the notice of all concerned.

No. CDN/CCP-5/84

Dated the 19th October, 1984

The Prime Minister has observed that the Ministries/Departments which are involved in construction activities have been acquiring land far in excess of their requirements. This hold good for project being set up either directly by Ministries or through public sector enterprises.

2. This has several undesirable consequences. It uproots a large number of farmers and often renders them homeless and jobless. Delays in payment of compensation for the land acquired also adds to the difficulties of the persons dispossessed. Valuable agricultural land also may be lost in the process. With the growth in population, it is becoming more and more difficult to find adequate land for housing.
3. It has therefore become necessary to economise on the use of land and adopt modern methods to maximise the utilisation of land available. Prompt payment of compensation of the land acquired must also be ensured. It is requested that these instructions may be followed scrupulously.

To

DG(RD) and all Wing heads.

Copy to :

All Directors and Deputy Secretaries in T.W. and Roads Wing.

No. RW/NHIII/P/28/84

Dated the 16th Nov., 1984

To

All Secretaries of P.W.D. in States and Union Territories

Subject : Posting of land Acquisition Officers with the Superintending Engineers dealing with National Highways and other Centrally sponsored works

It has been noted that the delay in the land acquisition proceedings causes cost and time overruns of the National Highway Projects and this upsets the planning as well as achievement of desired targets. This Ministry has already issued the instructions regarding acquisition of land before considering the sanction of main project vide letter No. RW/NHIII/P/5/83 dated 18.5.1983. But this has not helped much in expediting the acquisition of land. The delay in the land acquisition proceedings is mainly due to lack of rigorous pursuit with the revenue authorities and due to non-availability of full-time staff in the technical organisations to look after the land acquisition matters exclusively.

2. It is, therefore, suggested that one Land Acquisition Officer should be exclusively attached to each of the Circle Offices (S. E's Offices) to look after all the land acquisition work. It is expected that this will go a long way in cutting down the delays presently experienced.

142 NH PROPERTY, INSPECTION BUNGALOWS, STATUS, ACCESS CONTROL

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
142.1.	PL-13 (5)/56 dt 17.1.57	Improvement and Maintenance of Existing Inspection Bungalows and Rest Houses attached to NHs	142/1
142.2.	PL-13 (5)/56 dt 21.6.58	Improvement and Maintenance of Existing Inspection Bungalows and Rest Houses attached to NHs	142/1
142.3.		Rules for the Occupation of the Inspection Bungalows and Rest Houses situated on NHs	142/2
142.4.	WII-2 (37)/61 dt 30.9.61	Erection of Hoardings and Advertisement Boards on NH Roadside Lands	142/4
142.5.	WI-43 (1)/63 dt 20.2.63	Inspection Regarding Erection of Structures on NH Land	142/4
142.6.	WI-43 (12)/64-NHI dt 4.1.68	Fixation of Sign Boards on NHs	142/5
142.7. 143.2.	NHI-40 (1)/68 dt 31.1.69	Maintenance of NH Connecting Two Ends of a Bypass	142/5
142.8. 143.2.	NHI-40 (1)/68 dt 1.5.69	—do—	142/5
142.9.	NHI-40 (16)/70 dt 10.12.70	Use of NH Land for Residential purposes	142/6
142.10. 4110.	NHIII-33 (50)/72 dt 12.3.76	Improvements to IBO	See Code No. 4110
142.11.	NHIII/P/58/76 dt 13.8.76	Erection of Statues within NH Land Boundaries	142/6
142.12. 143.2.	NHIII/P/9/77 dt 30.11.77	Status of Lengths Replaced by NH Bypasses, Realignment etc.	142/6
142.13.	NHIII/P/17/75 dt 30.10.80	Licensing of NH Land for Construction of Approach Road	142/7
142.14.	NHIII/P/58 dt 3.4.81	Erection of Statues within NH Boundaries	142/11
142.15. 143.2.	NHIII/P/9/77 dt 12.4.82	Status of Lengths Replaced by NH Bypasses, Realignment etc.	142/12

NO. PL-13 (5)/56.

Dated the 17th January, 1957

To All State Governments (Departments Dealing with Roads)

Subject : Improvement and maintenance of existing Inspection Bungalows and rest houses attached to National Highways

I am directed to say that the Government of India have been meeting expenditure on the improvement and maintenance of inspection bungalows or rest houses attached to national highways for which they had accepted liability. The expenditure involved was being met from the funds voted by Parliament for the development and maintenance of National Highways.

2. As the State Government are aware, the National Highways Act, 1956, which was recently enacted by Parliament received the assent of the President on the 11th September, 1956. The Act will be brought into force as early as possible. While it will be permissible for the Government of India to incur expenditure on the development and maintenance of National Highways under the Act, it will not be possible for them to continue to incur expenditure on the improvement or maintenance of existing inspection bungalows or rest houses attached to the National Highways so long as the buildings are the property of the State Government. If, however, the ownership of the buildings could be transferred to the Government of India for National Highway purposes, there would be no objection to expenditure on their improvement and maintenance from National Highway Funds.
3. I am, therefore, to enquire whether the State Government are prepared to transfer to the Government of India free of cost the ownership of the inspection bungalows or rest houses in question in order to enable the Government of India expend monies on the maintenance and up keep of these bungalows or rest houses. If the State Government agree, the Government of India will be glad to receive a list of such inspection bungalows or rest houses attached to National Highways in the State.

No. PL-13 (5)/56

Dated the 21st June, 1958

To

All State Govts.
(Departments dealing with Roads)

Subject : Improvement and maintenance of existing Inspection Bungalows and rest houses attached to National Highways

I am directed to refer to the Ministry's letter No. PL-13 (5)/56 dated the 17th January, 1957, and to say that the Government of India have re-examined the question of meeting the expenditure on the improvement and maintenance of inspection bungalows and rest houses attached to National Highways and to state the position as indicated in the succeeding para.

2. The definition of the term "highway" given in section 4 of the National Highways Act, 1956, covers all land appurtenant to a National Highway and such structures, fences, trees, etc., mentioned in that section as fall within that land. If an inspection bungalow or rest house falls within the National Highway land, its ownership vests in the Central Government and they can incur expenditure on its improvement and maintenance as was done before the National Highway Act, 1956, came into force. The land falling within the boundary lines on either side, of the centre line of the National Highway as well as any land adjacent to the boundary line of the National Highway and attached to the boundary line of National Highway and attached to any structure such as an inspection bungalow or rest house primarily meant for the convenience of Public Works Department officers in charge of National Highways shall be considered as the land appurtenant to the National Highway.
3. In the circumstances, I am to request that a list of such inspection bungalows and rest houses as fall within the National Highway land as defined in the preceeding para may kindly be furnished to this Ministry as early as possible to enable the Government of India authorise expenditure on their improvement and maintenance.
4. I am to add that the Government of India have decided that the following broad principles should be applied in the use of these inspection bungalows and rest houses :—

- (1) All income be credited to the Central Govt.

- (2) The order of preference in the reservation of accommodation will be as under :—
 - (i) Central and State Government Officers in-charge of the National Highways
 - (ii) Other Central or State Government Officers
- (3) The Executive Engineer, in whose jurisdiction the building lies, will make the reservation
- (4) Non-officials and officers not on duty will be allotted accommodation when Government officers on duty do not require it and will pay rent on an approved schedule
- (5) In the matter of rents, etc. all (Central and State) Government Officers will be treated at par
5. It is requested that the rules in force may be revised, where necessary, in order to make them conform to the aforesaid principles and concurrence of this Ministry obtained to the draft revised rules.
6. This letter disposes of your letters for to Bombay only, @ to Assam only No. ITW. 3857-W. dated 22nd April 1957* @@ to West Bengal only ONH : 395/56/16666, dated 1st August 1957@ 723 W (C), dated 6th February, 1958@@

* to Bombay only
 @ to Assam only
 @@ to West Bengal only.

142.3

RULES FOR THE OCCUPATION OF THE INSPECTION BUNGALOWS AND REST HOUSES SITUATED ON NATIONAL HIGHWAYS

1. All income from Inspection Bungalow and Rest Houses situated on National Highways will be credited to the Central Government under the Head "XXXVII- Public Works-Central".
2. The bungalows shall be in-charge of Divisional Engineers (Highways) or the Executive Engineers, in whose jurisdiction they lie.
3. The Bungalows shall be open to bonafide travellers and other persons mentioned in rule (4) for occupation on payment of fee prescribed therefor, and subject to the condition that it shall be vacated immediately if so required by the Divisional Executive Engineer concerned who shall also have power to forbid occupation of any particular person in consultation with the Chief Engineer (Roads and Buildings) if it is observed that the person has used it improperly. No cinemas, circus or dramatic troupe shall be permitted to occupy the bungalow or the premises.

The Division Engineers (Roads and Buildings) or Executive Engineers shall consider applications for reservations of rooms in the bungalow if they are received at least three days in advance of the date of occupation.

4. The order of preference for the occupation of the bungalows shall be as shown below :—
 - (a) Ministers; Central and State, Speakers, Chairman and Deputy Speakers of Legislatures;
 - (b) Government Officers (Gazetted) on inspection of the National Highways and District Collector with their jurisdiction;
 - (c) Government Officers (Gazetted) on duty, heads of Hills Parishad and Panchayat Samithies and high Officers of Public undertakings on official duty;
 - (d) Members of Legislatures;
 - (e) Government Officers (Non-Gazetted) on duty;
 - (f) Government Officers on duty;
 - (g) General Public.
5. (1) In case the law and order conditions be disturbed the Controlling Authority will have discretion to use the normal order of precedence in respect of the Gazetted Officers of the Police Department provided Hon'ble Ministers are not affected.

Note :

1. The expression "General Public" occurring in the above rule includes, non-gazetted Officers of the neighbouring States.
2. The term "President" of a District Zilla Parishad Board includes a President delegate or a Vice-President, while discharging the functions of President.
3. Gazetted Officers of the neighbouring States may occupy the Inspection Bungalows in the district adjoining such States on the same condition as Gazetted Officers of the State Government.
4. The Inspection, I.A.S.C., the Collector of Military Accounts, Southern Command, and the Dy. and Assistant Controllers of Military Accounts will be ranked among the State non-gazetted officers for purposes of these rules.
5. The Controller of Army Factory Accounts, the Director Geological Survey of India, and the Gazetted Officers of their staff will be ranked among the State Gazetted Officers while the non-gazetted officers of their staff will be ranked among State non-gazetted officers of purposes of these rules.

6. All persons occupying the Bungalows will be charged fees at the following rates :—

FEES PAYABLE FOR A SINGLE DAY

	First Class Bungalow		Second Class Bungalow		Third Class Bungalow	
	Rs	P	Rs	P	Rs	P
1. Single person	1	00	0	75	0	50
2. Married couple or a single person accompanied by a member of his family	1	50	1	00	0	75

NOTE :

"Family" includes wife and children including an adopted son and step children of a Government servant residing with and wholly dependent on him (vide Rule-2 of the Manual of Special Pay and Allowance).

- 5 (1) A fee of 50 paise per day in the case of First Class Bungalow and 25 paise per day in the case of other Bungalows will be charged for every additional member of a touring Officer's family accompanying him in excess of one but not more than four.
- 5 (2) No fee shall be charged for the minor sons and daughters of an officer. An Assistant or any other person who is not a member of a family when only one set of rooms is available for occupation. If on the other hand the other set of rooms is also available for occupation at that time, such a person should be charged as an independent occupant though he does not occupy it, but occupies the same set of rooms as the officer.
- 5 (2) For parties exceeding five in number the fee will be five times the fee charged for similar occupation by a single person.
- 5 (3) A day's fee will be charged for an occupation of 12 to 24 hours duration and half a day's fee will be charged for an occupation of less than 12 hours.
- 5 (4) Payment of full fees for the occupation of a bungalow gives the right to pitch tents in the compound without extra charge. When the bungalow is not occupied half the ordinary fee should be paid for the privilege of pitching tents. An officer occupying the bungalow has prior claim to the use of the out-houses and a garage attached to the bungalow. Subject to this condition that they are available without further charge for the use of officers occupying tents in the compound. A charge of 25 paise a day will be fixed for the use of such out-houses only.
- 5 (5) In case when an officer sends his luggage in advance with the object of occupying a bungalow or of pitching tents in the compound or, vacates the bungalow before his camp equipment is moved, rent will be charged for the days the officers actually stay provided that the luggage is stored for not more than 24 hours before the arrival or after the departure of the officer. Rent at half the rates will be levied for periods in excess of these limits.
- 5 (6) If a bungalow which is temporarily reserved for a specific period for an officer with reference to rule 3 above is occupied by him from the first day of reservation but is vacated before the expiry of the full period of reservation rent should be recovered from him only for the actual period of his occupation provided his departure is promptly notified to the nearest official of the Department, and the notice of reservation hung up in the bungalow removed immediately after it is vacated. If the bungalow is not occupied by the officer from the first day of reservation and the reservation is not cancelled, before that date, rent should be recovered from him for the days covered by the reservation until the reservation is cancelled whichever is earlier.
- Touring officers should give specific intimation to their subordinates in districts or to the Divisional/Executive Engineers (Roads and Buildings) and his subordinates whether Bungalow should got reserved for them with reference to rule 3 above. If, under their instructions, bungalow are so reserved but not occupied, rent should be recovered for the period of reservation, even if there were no applications from others for occupations during the period. But the Divisional/Executive Engineers (Roads and Buildings) incharge of the bungalow are allowed to use their discretion and waive the recovery of rent in exceptional cases being given to the interest of the Government of India.
- 5 (7) In the cases of Bungalows which have electric installation enhanced fees shall be paid as specified below :—
- (a) An additional fee of Rs. 0.37 for each set of rooms under occupation for 24 hours or part thereof will be charged to cover the charges for the use of electric lights etc.
- (b) In addition to the electric charges of Rs. 0.37 towards lights an amount of Rs. 0.13 will be charged for each set of rooms provided with a ceiling fan under occupation for 24 hours or part thereof :

NOTE :

- (1) These additional fees should be charged when the electric installation is in working order. But when the electric installation is not in working order or under repair or renewal the occupant should not be charged either for electric installations or for the electric energy.

The additional fees for Electric installation should not also be charged if only tents are pitched in the compound of the bungalows :

6. A book shall be kept at the bungalow in which all persons occupying the bungalow shall be required to enter their names and addresses at the time of their arrival and departure, fees due and amount paid persons occupying the bungalow should enter in the column "NAMES" his own name and below that state the number of members of his family, if any, who accompanied him specifying merely their relationship.

7. The persons occupying the bungalow shall be responsible for any damage caused to the bungalow or fitting or other articles in it by himself or any of the members of his family or by his servants.
8. No person occupying the bungalow shall vacate it without paying the fees due. Any case of failure on the part of the person occupying the bungalow in this respect shall be immediately brought to the notice of the Divisional/Executive Engineer (H) by the Bungalow watch or through his officers.
9. Occupation of the Bungalow by a person or the family shall only have exclusive right of occupation of the rooms for which fee is paid by them.

No traveller is entitled to appropriate more than one set of rooms if the other set is in demand. The first comer is entitled to the choice of rooms.

10. Whenever the bungalow is occupied the occupants should ask the watcher to produce the scavenger for doing scavenging service and pay the scavenger at the rates fixed by the Roads and Buildings Department, in accordance with the local scavenging wages. The fact of having paid the wages should be entered in a column in the Inspection Bungalow book by the occupants before they vacate.

On the days on which more than one set of rooms in the bungalow are occupied the scavenger charges should be paid in equal shares by the occupants.

NOTE :

- (1) This rule is applicable only to inspection bungalow within municipalities which do not levy scavenging tax and also those within Panchayat board limits.
- (2) The Divisional Engineer (R&B) of the division concerned should enter at the foot of the copy of the rules hung in the bungalow the daily wages to be paid to the scavenger in accordance with the local scavenging wages.
11. Persons occupying the bungalow may make any complaint in the book provided for the purpose and the watcher attached to it shall send the book to the Divisional/Executive Engineer (Roads and Buildings) once in a month. If any complaint is received while the book is not available, it shall be forwarded to the Divisional Engineer/Executive Engineer (Roads and Buildings) within 24 hours of its receipt.
12. A copy of these rules shall be hung in each bungalow with the information as to the class of bungalow.

142.4

NO. WI-2 (37)/61

DATED THE 30TH SEPTEMBER 1961

To The Secretary, to the Govt. of Assam, Public Works Department (Roads and Buildings Wing), Shillong

Subject : Erection of hoardings and advertisement boards on National Highway road-side lands

With reference to your letter No. CNH-1/61/5, dated the 23rd August, 1961, on the subject mentioned above, I am directed to say that no advertisements should be permitted on National Highway land except signs and notices etc. of the type mentioned in para 3.3 of the "Policy on road-side Advertisement", issued by the Specifications and Standards Committee of the Indian Roads Congress.

2. As no advertisement hoardings are to be allowed on National Highway land, the question of fixation of rent does not arise.

142.5

No. WI-43 (1)/63

Dated the 20th February, 1963

To.

All State Governments Department dealing with
National Highways (except Tripura and Andaman
and Nicobar Islands where there are no National Highways).

Subject : Instructions regarding erection of structures on National Highway land

I am directed to say that instances have come to notice where structures like power transmission towers, telegraph or telephone poles (or cables), pipe lines, approach roads, culverts for approach roads or for irrigation channels, etc. have been erected on National Highway road land without the prior permission of the Government of India. Subsequent improvements to the road become difficult and costly as they involve the removal or shifting the structures, which is often objected to by the authorities concerned.

2. I am accordingly to request that it may kindly be ensured that no structure of any kind is permitted to be put up on National Highway road land without the prior approval of this Department. Suitable instructions may kindly be issued to the concerned Departments in your State under intimation to this Department.
-

No. WI-43 (12)/64-NHI

Dated the 4th January, 1968

To

The Secretary to the Govt. of Orissa,
Works and Transport Department, Bhubaneswar.

Subject : Fixation of sign-boards etc. on National Highways

I am directed to refer to the correspondence resting with your letter No. NH-IIM-30/66-21994, dated the 20th December, 1966 and to say that the proposal contained in your letter No. 450, dated the 11th January, 1965 has been considered. The erection of "Family Planning Programme Boards" on National Highway lands would constitute a source of distraction to fast moving traffic and would defeat the fundamental purpose of ensuring safety to the travelling public on main arterial roads like National Highways. The Govt. of India are, not, therefore, of the view to relax their policy and allow the erection on national highways of the hoardings not connected with the use of the road. The Government of India feel that the erection of such sign boards could better be done in populous areas, away from the road side, to achieve the purpose.

No. NHI-40 (1)/68

Dated the 31st Jan., 1969

To

The Secretary to the Govt. of U.P.
PW (E) Department, Lucknow

Subject : Maintenance of National Highway connection two ends of a bypass

I am directed to refer to your letters No. 2148E/23/PWE-59/N/66 dated the 5th April, 1968 regarding maintenance of the National Highway bypasses and the abandoned portions of the highway thus bypassed and to say that the Government of India have been advised that under section 5 of the National Highways Act, 1956, it is their responsibility to develop and maintain in proper repair all National Highways. Changes in alignment do take place occasionally and where that happens, it is responsibility of the Central Government to maintain the changes in portion of the National Highway. In the Schedule attached to the National Highway Act, the highways are described in general terms and the alignments are not specified. It does not appear to be intention of the Act that any changes in the Schedule should take place merely because of changes in alignments of portions of the National Highways automatically becomes part of the National Highways can be administratively made over to the State Government for maintenance without making any change in the schedule to the act or issuing any notification under section 5 thereof.

No. NHI-40 (1)/68

Dated the 1st May, 1969

To

The Secretary to the Govt. of U.P.,
P.W. (E) Deptt, Lucknow

Subject : Maintenance of National Highways connecting the two ends of a bypass

I am directed to refer to your letter No. 46 GIE/XXIII-PWE-59N/66, dated the 15th March, 1969 and to confirm that the abandoned portion of the National Highway ceases to be a part of the National Highway system and no longer vests in the Government of India. The State Government to whom the abandoned portion of the National Highway is made over are competent to transfer it to any local authority under its control.

No. NHI-40 (16)/70

Dated the 10th December, 1970

To

All State Governments
(Department dealing with National Highways),
Except Tripura, Andaman and Nicobar Islands,
Dadra and Nagar Haveli, Goa, Daman & Diu,
N.E.T.A. and I.G. & A Islands and Chandigarh

Subject : Use of National Highway land for residential purposes

I am directed to say that as the State Government are aware it is the policy of the Government of India not to permit use of National Highway land for any private purpose and to remove all encroachments on these highways. In reiterating this policy I am to state that no request for use of National Highway land for private purpose may be entertained.

No. NHIII/P/58/76

Dated the 13th Aug., 1976

To

The All State Governments and Union Territories
(Deptt. dealing with National Highways)

Subject : Erection of Statues within National Highway Land Boundaries

This Ministry has been receiving requests from the State Governments for permission to erect statues of political/religious leaders or other personalities within the limits of National Highway land. Structures of this kind detract the attention of motorists affect motoring visibility and cause crowding of people which may result in hazardous situations. As such it is requested that as a rule statues should not be permitted within the National Highway land within 60 metres of any road junction.

2. The above instructions may please be brought to notice of all officers in your department engaged on National Highway works.

No. NHIII/P/9/77

Dated the 30th Nov., 1977

To

The State Govts.
(Deptt. dealing with National Highways)

Subject : Status of lengths replaced by N.H. bypasses re-alignments etc.

With a view to bring home afresh to the State Governments the decision of this Ministry, on the subject noted above, attention is invited to this Ministry's letter No. NHIII-40 (1)/68 dated 1st May, 1969 addressed to the Secretary to the Govt. of Uttar Pradesh (WD), Lucknow, with endorsement dated the 31st January 1968 to all the State Govts. (PWDs) and the State Chief Engineers (N.H.). As indicated therein an abandoned length would cease to be part of N.H. system and would no longer vest in the Government of India and that the State Government to whom the abandoned length reverts would be competent to transfer it to any Local Body under their control.

2. In this connection a copy each of this Ministry's letter No. NH-40 (1)/68 dated the 1st May, 1969 and No. NHI-40 (1)/68 dated the 31st January 1969 referred to above are enclosed for ready reference.

No. NHIII/P/17/75

Dated the 30th Oct, 1980

To

All State Govts. & Union Territories,
(Deptt dealing with NHs)

Subject : Licensing of NH Land for the construction of approach road to private property abutting on National Highways

In supersession of earlier instructions on the subject mentioned above I am directed to convey the following consolidated instructions regarding licensing of National Highway land for the construction of approach roads to private property abutting on NHs.

2. Under Section 4 of the NH Act, 1956 all NHs vest in the Union and Section 5 of the Act it is the responsibility of the Central Govt. to develop and maintain them in proper repair though the Central Govt. may, by issue of a Notification in the official Gazette entrust the function in relation to development or the maintenance of any NH to a State Govt. within the jurisdiction of which that NH is situated. The aforesaid entrustment or delegation does not cover the licensing/leasing of NH Land for any purpose as this is not a function related to the development or maintenance of the NHs. Until therefore, the State Govts. are specifically authorised in this behalf by an Act of Parliament formal permission for lease of NH land for any purpose can be granted only by the Government of India through the execution of a licence deed prescribed for the purpose.
3. It should be expressly understood license of NH land shall only be for approach road and not for the construction of any other kind of structure.
4. The detailed instructions regarding Regulations of access points have already been laid down vide this Ministry's circular letter No. NHIII/P/72/76 dated 13.1.77 reproduced below :

"In urban areas the spacing of access to Arterial highways should wherever possible be restricted to 500 metre interval. If any highway is likely to be developed as Expressway/Motorway the spacing should be 1000 metre.

In rural area spacings of connections from parallel service roads and of intersection should not be closer than 750 m. Individual driveways to private properties other than petrol pumps should not be spaced closer than 300 metre from each other or from an intersection. Regarding petrol pumps practice recommended in IRC 12 & 13 should be followed. On highways with dual carriageway median openings should generally be limited to intersection with public roads and should not be permitted for individual business needs. Where intersections are far apart, median openings may be provided at intervals of 2 km for permitting U-turn and diversion of traffic to one of the carriageways at times of emergency or major repairs. *If the land width is equal to the width between building lines indicated in this column, the building lines should be set back 2.5 metre from the road land boundary lines.

Generally the building and control lines would be symmetrical about the roadway. These should be strictly enforced by State Govts. along all National Highways/Strategic Roads while approving schemes of development and specifying land use. Necessary legislation to enforce these where required may also be enacted.

No structure of any kind, save the ones required for the development and operation of the highway or those for which the State's have been authorised separately, should be permitted to be put up on NH road without the prior approval of the Ministry".

5. The proposals conforming to these standards mentioned above may be approved by the State Chief Engineers themselves and the licensee permitted to construct the approaches, culverts, etc. after he has executed the licence deed. (See para 8).
6. The cases where the standard conditions are not satisfied should not be approved, but the parties concerned may be requested to make the necessary modifications so as to fall in line with the standard conditions. After modifications, such cases can be dealt with as in para 5.
7. All proposals where it is not practicable to fulfil the standard conditions but the State Chief Engineer recommends certain relaxations, may be referred to the Govt. of India for final decision with reasons for relaxation. Till the final decision is reached, the State Govts. should not enter into any commitment with the parties concerned.
8. A specimen copy of the licence deed to be entered with the Private Party is enclosed (Annexure 1). The licence should be drawn up on non-judicial stamp paper and all expenses in this regard borne by the licensee. A certificate to the effect that all standard conditions have been satisfied together with a certified copy of the layout plan should be forwarded along with the licence deed to this Ministry for signature for and on behalf of the President of India. No rent need be charged from the licensee in respect of the land for which the licence is issued. The licence deed is not required to be registered.

9. The licence should initially be valid for a period of three years, renewable for every three year period thereafter. A copy of the form for renewal of the licence is enclosed vide Annexure 2. It shall be the responsibility of the Licence (s) concerned for getting the licence renewed well in time. As in the case of initial licence deeds, the renewal deeds should be forwarded by the State Govts. to the Govt. of India together with their recommendation whether the licence may be renewed.
10. It is requested that the contents of this circular may be brought to the notice of all concerned officers in your department dealing with National Highways.

ANNEXURE I

LICENCE FOR THE USE OF NATIONAL HIGHWAY LAND

*Here enter details of premises i.e. land revenue No. etc.

*Here enter name of National Highway

@ Here enter full details of the party in whose favour licence is issued

£ Here enter the name of National Highway

AGREEMENT TO construct an approach road with necessary provision for drainage to * _____

abutting on the boundary of * _____ in Kilometre _____ in survey No. _____ of the village _____ in the Taluka of _____ of the _____ District

AN AGREEMENT made this _____ day of _____ one thousand nine hundred and _____ between the President of India (hereinafter called the 'Government' which expression shall, unless excluded by or repugnant to the context, include his successors in Office and assigns) of the one part, and @ _____ hereinafter called "the Licensee"/"the Licensees" (which expression shall, unless excluded by or repugnant to the context, include the said licensee's successor/Licensees' successors, heirs, executors administrators and assigns) of the other part.

2. WHEREAS THE Licensee' has /Licensees have applied to the Government for permission to construct on the Government land an approach road with necessary provision for drainage to his /their property abutting on the boundary of £ _____ in Kilometre _____ in the _____ Taluka of the _____ District, more particularly described in the Schedule annexed hereto and shown in the drawing attached hereto (hereinafter referred to as "the said premises")
3. AND WHEREAS THE Government have agreed to grant such permission on the terms and conditions hereinafter mentioned.
4. Now, this agreement witnesseth that, in consideration of the terms and conditions hereinafter contained and on the part of the licensee/licensees to be observed and performed, the Government hereby grants to the licensee/licensees permission to construct an approach road with necessary drainage works to the said premises as per approved drawings attached subject to the following terms and conditions, namely :—
 - (1) That the licensee/licensees shall, within three months from date of receipt of the permission, but without interfering in any way with the road traffic, complete the construction of the approach road and shall make provision for drainage to the full satisfaction of the Executive Engineer/Divisional Engineer incharge of the National Highway according to the approved drawings and specifications. The said approach road shall not be brought into use after its completion unless the Executive Engineer (Divisional Engineer) gives a completion certificate after satisfying himself that it has been completed as per the sanctioned drawings and specifications.
 - (2) That on the completion of the said work, that part of the approach road, which lies within the limits of Government road land together with any culvert or drain therein constructed shall become the

absolute property of the Government, subject to the rights or the licensee/licensees to use the same for egress and ingress.

- (3) The licensee/licensees shall at his/their own cost keep the said approach road, and any culvert or drain therein, in proper repair and condition to the satisfaction of the Executive Engineer/Divisional Engineer.
- (4) That within Six months of a notice duly given to the licensee/licensees in this behalf, the licensee shall at his/their own cost remove the said approach road or any drainage work constructed in connection therewith and restore the land to its original condition, when required to do so by the Government or by any person duly authorised on its behalf. The licensee/licensees shall not be entitled to any compensation on account of such removal and restoration.
- (5) That the approach road shall not be used for any purpose other than that of access to and egress from the premises of the licensee/licensees on to the Government road,
- (6) That the licensee/licensees shall not, without the previous permission in writing of the Executive Engineer/Divisional Engineer in any way extend or alter the said approach road or any culvert or drainage therein.
- (7) That the licensee/licensees shall at all times permit any duly authorised officer or servant of the Govt. to inspect the said approach road including any culvert or drainage therein. He shall keep the said approach road soon and shall not be entitled to close any right of way over or in respect of the same against Government or any member of the Public.
- (8) That the licensee/licensees shall be liable for any loss or damage caused to the Government by drainage obstruction or any other like cause due to the said approach road or the drainage work.
- (9) That the permission granted by this license shall not in any way be deemed to convey to the Licensee/Licensees any right into or over, or any interest in Government land other than that herein expressly granted.
- (10) That in case the said approach road is destroyed, this licence shall determine and the licensee/licensees shall not be entitled to claim any right to construct another approach road in lieu of that so destroyed.
- (11) That during the subsistence of this licence, the said approach road including the road drainage shall be deemed to have been constructed and continued only by the consent and permission of the Government so that the right of the licensee/licensees to use the same shall not become absolute and indefeasible by lapse of time.
- (12) That, if the licensee fails/licensees fail to execute any work which he has/they have agreed to execute under this agreement to the full satisfaction of the Executive Engineer/Divisional Engineer the work shall be executed by the Executive Engineer/Divisional Engineer at the cost of licensee/licensees and the expenditure incurred shall be recoverable from the licensee as an arrear of land revenue without prejudice to any other remedies which may be open to Government in this behalf.
- (13) That the licensee/licensees shall not sell, transfer or otherwise dispose of the premises without obtaining from the transferee a duly executed agreement with the Government embodying the terms and conditions herein before mentioned.

Definitions

61 to 1980

1 of 1956

1 of 1956

59 of 1961

38 to 1963

31 of 1966

- (14) That no fee shall be charged for the license.
 - (15) That if and when parallel service roads are constructed the access to the premises shall be from the service road alone as determined by the Executive Engineer/Divisional Engineer and no claim for compensation shall be entertained on that account.
 - (16) That this agreement shall remain in force for three years from the date of execution in the first instance and be terminable by a notice of 6 months and the permission may or may not be renewed after expiry of the said period.
 - (17) That the licence hereby granted shall not be transferable.
 - (18) That the licensee/licensees shall bear the cost of stamping and execution of this Agreement.
5. Notwithstanding anything contained in clause 4 (4), this licence may be cancelled at any time by the licensor through the Executive Engineer/ Divisional Engineer for breach of any of the terms and conditions of the licence and the licensee/licensees shall not be entitled to any compensation for loss caused to him/them by such cancellation nor shall he/they be absolved from any liability already incurred by him/them under this agreement. The licensee/licensees shall at his/their own cost remove the approach road lying within the boundary of the Government land and restore the Government land to its original condition. In the event of licensee/licensees refusing to do so, the restoration of the Government land to its original condition shall be done by the Executive Engineer/ Divisional Engineer at the cost of licensee/licensees and the expenditure incurred shall be recoverable from the licensee/licensees as an arrear of land revenue without prejudice to any other remedies which may be open to Government in this behalf.

SCHEDULE

(here type the schedule referred to in clause 2)

IN WITNESS WHEREOF this agreement is executed in duplicate by the parties hereto on the dates mentioned below their respective signatures.

*Signed by Shri (Name in full)
the licensee
the constituted attorney of
the licensees.*

*For and on behalf of the President of India
Under Secretary to the Government of
India, Ministry of Shipping & Transport
(Road Wing)*

In the presence of

1. Name in full (signature)
with designation.

1. Name in full with (signature)
designation

2. Name in full (signature)
with designation

2. Name in full (signature)
with designation.

N.B. Wherever alternatives such as "at"/from, his/their licensee/licensees Divisional/Executive has/have etc. are given, only applicable portion should be typed in the fair licence deed.

ANNEXURE 2

Form for renewal of licence for the use of National Highway land

*to be written in words

AN AGREEMENT made this _____ day of (month) _____ of _____ (Year*) _____ between the President of India (herein-after called the 'Government' which expression shall, unless excluded by or repugnant to the context, be deemed to include his successors and assigns) of the one part and (name of the party) _____ Hereinafter called "Licensee"/"licensees" which expression shall, unless

excluded by or repugnant to the context, be deemed to include his/their heirs its successors/their successors and assigns of the other part.

WHEREAS an agreement dated _____ (hereinafter referred to as "the principal agreement") has been entered into between the Government and the licensee/licensees to construct on the land belonging to the government an approach road with necessary provision for drainage to his/their property.

AND WHEREAS it has been agreed to by and between parties to these presents to renew the said licence on the same terms and conditions as are set forth in the principal agreement.

NOW THEREFORE it is agreed by and between the parties that the principal agreement be and the same is hereby renewed for a period of three years from the date of expiration thereof.

The licensee/licensees shall bear the cost of stamping and execution of this agreement.

IN WITNESS WHEREOF this agreement is executed in duplicate by the parties hereto on the dates mentioned below their respective signatures of the President of India has signed this licence and the licensee/licensees has/have also signed this licence, the day, month and year first above written.

*Signed by Shri (Name in Full)
the licence
the constituted attorney
of the licensees.*

*Signed by Shri (Name in Full)
for and on behalf of the
President of India.*

In the presence of

- | | |
|--|---|
| 1. Name in full (signature)
with designation. | 1. Name in full (signature)
with designation |
| 2. Name in full (signature)
with designation. | 2. Name in full (signature)
with designation |

N.B. Wherever alternatives such as his/their Licensee/Licensees has/have etc. are given, only applicable portions should be typed in the fair licence deed.

142.14

No. NHIII/P/58/76

Dated the 3rd April, 1981

To

All State Governments and Union Territories
(Deptt. dealing with National Highways)

Subject : Erection of statues within National Highway land boundaries

I am directed to say that vide this Ministry's letter of even number dated the 13th August, 1976, instructions were issued that as a rule statues of political/religious or other personalities should not be permitted to be erected on National Highway land within 60 metres of any road inter-sections as such structures detract the attention of road users, affect visibility and cause crowding of people which may result in hazardous situations.

- A question has been raised whether such structures could be permitted on N.H. land beyond the stipulated clearance distance of 60 m from any road inter-sections. In this connection, it is clarified that it has been the policy of this Ministry not to permit structures of any kind including statues within the N.H. land boundaries, have the ones required for the development, maintenance or operation of the highway or those for which specific prior permission has been accorded by the Ministry. Accordingly, it is requested that erection of statues and like structures should not be permitted anywhere within the N.H. land boundaries.
- Contents of this letter may please be brought to the notice of all officers in your Department engaged on National Highway works.

No. NHIII/P/9/77

Dated the 12th April, 1982

To

All Technical Officers in the Roads Wing/US(NH)A/US(NH)B/US(RM)/
All Works Sections in the Roads Wing

Subject : Status of lengths replaced by National Highways byepasses re-alignments etc.

Attention is invited to our Circular letter No. NHIII/P/9/77 dated the 30th Nov., 1977 on the above subject. It has been stated in the above circular that abandoned length of the National Highway would cease to be a part of National Highway system and would no longer vest in the Govt. of India and that the State Govt. to whom the abandoned length reverts would be competent to transfer it to any Local Body under their control, except where the abandoned portion of the land may be required for four-laning in future. However, in order to make this position more clear to the State Govt., it is requested that in future in all cases whenever there is a change in alignment a suitable letter indicating the kilometres of the new alignment and the abandoned portion may be sent to the State Govts. to avoid any possibility of maintenance etc. being charged for both old and new National Highway Sections. A specimen copy of the draft letter to be sent in such cases is also enclosed for guidance and necessary action.

Enclosure : (Not printed).

143.1 URBAN LINKS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
143.1.1 (160)	PL-13 (7)/51 dt. 16.2.54	Acceptance of Central Financial Liability for the Development & Maintenance of Road Links within large Towns served by NHs.	143.1/1
143.1.2 (160)	WI-1 (6)/54 dt. 1.6.57	—do—	143.1/3
143.1.3	N-17/KR/10/75 dt. 9.3.76	Clarification as to whether Panchayat with a Population of 20,000 or more is a 'Municipal Area' as Defined in Section 3 of the NH Act, 1956	143.1/4
143.1.4 (7600)	RW/NHIII/Coord/86/84 dt. 17.5.84	Drainage in Urban Links and Bypasses	143.1/4
143.1.5.	RW/NHIII/P/30/84 dt. 17.10.84	Guidelines for Widening the Carriageway of NHs Passing through Urban Areas	143.1/5

No. PL-13 (7)/51

Dated the 16th Feb., 1984

To

1. The Secretary to the Government of All part 'A' States and Part 'B' States (except Mysore and Jammu and Kashmir)—Departments concerned with roads.
2. The Chief Secretary to the Government of Ajmer.
3. The Secretary to the Government of Himachal Pradesh, Public Works Department. Simla.
4. The Secretary to the Government of Vindhya Pradesh, Development and Social Service Department (P.W.Section), Rewa.
5. The Secretary to the Government of Delhi, Local Self Government, Delhi.
6. The Chief Commissioner, Kutch, Bhuj.

Subject : Acceptance of Central Financial liability for the development and maintenance of road links within large towns served by National Highways

I am directed to refer to the correspondence resting with this Ministry's letter No. PL-13 (19) 50, dated the 8th December, 1950, on the above mentioned subject, and to say that the Government of India have, after a careful review of the proposals made from time to time in the past, worked out a scheme for the maintenance and development of road links within large towns served by National Highways. This scheme is detailed in the following paragraphs.

2. For the purpose of this scheme, urban road links have been defined as follows :—

- (a) portions of existing National Highways lying within towns having a population of 20,000 or more; and
- (b) roads in towns having a population of 20,000 or more connecting the terminal points of two or more different National Highways at the boundary of the town or city.

(The maintenance and development of such links lying within towns having a population upto 20,000 is already the responsibility of the Central Government).

3. *Road links within large towns which will be eligible for being treated as permanent routes of national highways.* The Central Government have decided to accept financial liability both for the development and maintenance of only those urban road links which are suitable for taking through traffic and being declared as National Highway. The general criteria for this purpose are :
 - (a) The road land should be adequate for a through traffic road in the centre and parallel service roads for local traffic on the sides. At the very minimum the road land width should be not less than 100 ft. (50 ft. for the national highway proper and 25 ft. on either side for service roads) in built up areas.
 - (b) The road land should be free from encroachments or leased structures. If there are any encroachments on leased structures the State Government should undertake to remove the encroachments and, in cases of leases not to renew them.
4. The Centre's contribution towards the development and maintenance of the urban road links described in para 3 above will be to the extent indicated below :
 - (i) *Improvement.* The Central Government will meet the full cost of improvements to the carriageway for through traffic. In addition, the Central Government will also meet the initial cost of providing parallel service roads excluding the cost of acquisition of built up property if required therefor. Once constructed, the service roads will be maintained and improved by the State Government or the local municipality and the Central Government will have no liabilities for these items. The provision of municipal services such as lighting, drainage, scavenging, and sanitation for both the National Highway and service roads will be the responsibility of the Municipality concerned.
 - (ii) *Maintenance.* The Central Government will pay for the maintenance of these road links upto a sum calculated at the rate of Rs. 5000/- per mile or the actual expenditure incurred, whichever is less. If any expenditure has to be incurred in excess of Rs. 5000/- per mile for the proper maintenance of these link roads, such additional expenditure will have to be borne by the State Government.
5. *Treatment of road links which are not suitable for through traffic.* The road links within large towns served by national highways which do not satisfy the criteria laid down in para 3 above will be eligible for Central assistance in regard to maintenance only and that too only till such time as a new bypass is constructed. In these cases also the Central financial liability for maintenance will be limited to Rs 5000/- per mile or the actual expenditure incurred, whichever is less, and if any expenditure has to be incurred in excess of Rs 5000/- per mile on the proper maintenance of these link roads, such additional expenditure will be borne by the State Government.

6. *Construction of new bypasses.* If the road link in any town is not suitable for through traffic and it is decided to construct a new bypass, the incidence of the cost of construction of such a bypass will be as follows:
 - (i) Where the new bypass (which will be the National Highway proper) runs through the municipal limits, the Central Government will bear the full cost of land acquisition, construction, and future maintenance of the national highway proper. The State Government will be responsible for providing parallel service roads and meeting the cost of land acquisition, construction, and future maintenance of the same. The land required for the parallel service roads to a width of at least 35 ft. on either side of the national highway proper should be acquired simultaneously with the acquisition of land for the national highway proper. The actual construction of the parallel service roads may be taken up later but, in any case, it should be before any building activity is allowed near the bypass.
 - (ii) Where the new bypass runs outside the municipal limits, the Central Government will bear the cost of land acquisition, construction and future maintenance of the national highway without insisting on the State Government providing parallel service roads for future development. If, however, at any time the area begins to get built upon the State Government shall construct at its cost parallel service roads before allowing any building activity near the bypass or extending the municipal limits to include the whole or a part of the bypass. Where these service roads can be accommodated in National Highway land this will be permitted but the entire responsibility for constructing and maintaining these will be that of the State Government.
7. The scheme as described above will be governed by the following general conditions :
 - (i) All the construction and maintenance work debitable to the Centre shall be done through State Public Works Department.
 - (ii) The parallel service roads shall have limited access to the National Highway and these points of access shall be got approved by the Central Government.
 - (iii) The State Government should ensure that no toll, octroi or any other terminal taxes are levied by the local body concerned on vehicles passing through the link roads which are maintained and/or developed at Central expense.
 - (iv) The extent to which the Central Government can make available every year funds for improvement works on road links will depend on the grants voted annually by Parliament.
 - (v) Funds for improvement works will be sanctioned on the basis of detailed plans and estimates to be submitted to the Central Government for technical approval and financial sanction.
 - (vi) The Central contribution towards the maintenance of road links will be given on the basis of abstract particulars of estimates in the first instance and will eventually be limited to Rs. 5000/- per mile or the actual expenditure incurred during the year, whichever is less.
 - (vii) The Central Government will have power to impose conditions, so as to ensure the prevention and removal of encroachments from the road links. Road land should not be leased to any one without the approval of the Central Government.
8. There will be no objection to the State Government meeting the expenditure on the acquisition of land and construction of parallel service roads under this scheme (vide para 6 above) from their allocation account in the Central Road Fund.
9. Before, however, orders regarding the implementation of the above scheme are issued, the Government of India would be grateful if detailed information in respect of (i) the road links which are suitable for being maintained and developed as permanent routes of national highways (vide paras 3 and 4 above and (ii) those which are not suitable for through traffic (vide para 5 above) is furnished to this Ministry in the enclosed proforma as quickly as possible and in any case by the 31st March, 1954, in order to assess the extent of financial commitment involved. The proforma should be accompanied by maps of the towns showing all the existing roads, including the national highway link, which should be specifically marked thereon.

No. N-17/KR/10/75

Dated the 9th March, 1976

Subject : Clarification as to whether panchayat with a population of 20,000 or more its a 'Municipal Area' as defined in Section 3 of the National Highway Act, 1956

The question, whether the Panchayat with a population of 20,000 or more is to be treated as a "Municipal Areas" for the purpose of Section 3 of the National Highway Act 1956 was referred to the Ministry of Law for their advice. In this connection a copy of that Ministry's U.O. No. 10739/70-ADV-(A), dt. the 20th February, 1976 is circulated herewith for general information and guidance.

To

- (i) All Technical Officers in the Roads Wing including Regional Officers/Engineer Liaison Officers.
- (ii) Under Secretary (NH) A/Under Secretary (NH) B/Under Secretary (Budget).
- (iii) All Sections.

*NOTES IN THE MINISTRY OF LAW
(DEPARTMENT OF LEGAL AFFAIRS)
ADVICE (A) SECTION*

Section 3 of the National Highway Act, 1956 clearly shows that in order to come within the definition of the said provision three conditons are to be fulfilled :—

- (i) that it should be a municipal area;
- (ii) that it should have a population of 20,000 or more; and;
- (iii) that its control and mangement should have been entrusted to a Municipal Committee or a town area committee or any other authority.

As rightly pointed out in the note dated the 10th October, 1975 at page 7 ante the dictionary meaning of the word 'Municipal' is that which pertains to a city or town. Therefore, 'Municipal Area' as mentioned in (1) above or as used in Section 3 of the National Highway Act, 1956 will exclude any village area or rural area.

The preamble of the Kerala Panchayat Act, 1960 the relevant portion of which is placed at page 20-20 C, clearly shows that the said Act is intended for proper administration of "Village Officers through Panchayats by Organising them as units of Local self Government at village level in the State"

Section 2 of the said Act excludes the application of the Act to the "Areas which are within the limits of the Cantonments, Municipalities and the Municipal Corporations of the State of Kerala " In other words the areas covered by the Panchayat are not municipal area.

On the same reasoning the Panchayat areas are not municipal areas for the purpose of section 3 of the National Highway Act 1956.

Besides the above, the expansion "Any other authority" used in the above mentioned provision will take the sense from the preceding words applying the ejusdem generis rule of interpretation. Hence it may include any authority having the control or management of any Town or urban area and not rural or village area. Panchayat being in a village area will not come within the expression "any other authority"

The term "Panchayat" in the context of the Kerala Panchayat Act, 1960 really means village Panchayat as would be clear from the obvious provision of the Act.

In view of the position stated above, we are of opinion that a panchayat will not be treated as Municipal area for the purpose of National Highway Act 1956 only because it has a population of 20,000 or more.

The reference is answered accordingly.

No. RW/NHIII/Coord/86/84

Dated the 17th May, 1984

CIRCULAR

It is often observed that the National Highway through villages and towns suffers from lack of adequate drainage. In situations where sufficient right-of-way exists for use of the road as a suitable urban

PROFORMA
(No. PL-13 (17) 51)

Urban road links connecting national highways :—

- (1) suitable for development and maintenance as permanent routes of national highways.
- (2) not suitable for through traffic.

Name of Town or city	Route Nos. of National Highways serving the town or city	Description of the urban links				Type of surface	Date from which State Govt. assumed responsibility for maintenance of the urban links	Whether the property in the urban link vests in the State Govt.	Remarks
		Length	National Highways at terminal points	Road land width					
				In built up area (a) surfaced (b) Total	In open area (a) surfaced (b) Total				
1	2	3	4	5	6	7	8	9	10

Notes :

1. Only those towns and cities lying on National Highways and having a population of 20,000 (1951 census) or over should be included in this Statement.
2. Under column 6 an indication should be given, in case the existing road land width is less than 150 ft., whether there is scope for acquiring additional land to make up 150 ft.

143.1.2
160

No. WI-1 (6)/54

Dated the 1st June, 1957

To

All State Governments
(Departments dealing with Roads)

Subject : Acceptance of Central financial liability for the development and maintenance of road links within large towns served by National Highways

I am directed to invite a reference to the late Ministry of Transport letter No. PL-13 (7)/51, dated the 16th February, 1954, and to say that certain State Governments made a representation to the Government of India for reconsideration of the condition imposed in clause (iii) of paragraph 7 of that letter relating to the levy of octroi or other terminal taxes by the local body concerned. The Government of India have considered the representations in the light of the discussions that took place at the last meeting of the Transport Advisory Council held in February, 1956, on item 3 of the agenda dealing with the recommendations of the Committee of the Council regarding the levy of octrois so as to facilitate the free flow of goods through towns.

2. It has been accepted that local bodies can continue for the time being to levy octroi or other terminal taxes on goods that will be consumed in the locality but that transit goods should be free from this levy. The Council accordingly recommended that the system of issuing transit permits for vehicles on payment of a nominal fee and providing an escort, wherever possible, should be adopted by all States.
3. The object of imposing the condition relating to the levy of octrois or other terminal taxes, vide para 7 (iii) of the late Ministry of Transport letter of the 16th February, 1954, was to ensure that the movement of through traffic on national highways was not subjected to unnecessary impediments. Therefore, in accordance with the recommendation of the Transport Advisory Council, the Government of India have decided that the condition referred to should be modified as follows :—

“The State Governments should ensure that octrois or any other terminal taxes on through traffic and tolls are not levied by the local body concerned on the link roads maintained and/or developed at Central expense.

4. I am to request that State Governments who have not yet accepted the terms and conditions indicated in the Transport Ministry's letter of the 16th February, 1954, may communicate their views to the Government of India as early as possible.

link, it is desirable to improve the drainage system along with measures for improvement of the road. A good solution for such locations is a cement concrete pavement rather than a bituminous pavement. This option may also be investigated in such cases before sanctioning permanent improvement works.

To

All Technical Officers at the
Headquarters and Regional Officers

143.1.5

No. RW/NHIII/P/30/84

Dated the 17th October, 1984

To

All the State Chief Engineers dealing with National Highways

Subject : Guidelines for widening the carriageway of National Highways passing through urban areas .

The work of improvement of National Highways and National Highway links passing through urban areas requires special attention for providing a properly designed highway facility with minimum hindrance to the public during and after implementation of the improvement works. This calls for adequate advance planning, proper design of various cross section elements, coordination with concerned utility agencies and timely implementation of improvement works. The guidelines framed for adoption in such cases, by the State P.W.Ds/Highway Departments are described hereunder.

2. *Alignment plan & typical cross section.*

The alignment plan showing details of the existing road with respect to the road-side development giving *inter alia*, the right-of-way available, extra land required for widening the position of avenue trees, utility lines etc. should be prepared. The proposed improvements may be shown in a typical cross section. The cross section should be designed, avoiding cutting of trees where feasible, ensuring adequate drainage with suitable side drains and proper outfalls and providing separate and fixed space for utility lines, electric poles, under-ground cables etc. At this stage, coordination with the concerned utility agencies is essential for ascertaining the magnitude of rehabilitation of existing service lines and for providing space in the road consistent with the future development of these services. The master plan of the urban area should also be taken into consideration while formulating road improvement proposals. The proposed alignment plan and typical cross section framed after complying with the above guidelines should be got approved by the Ministry. The work of widening the road may then be carried out in three phases as described hereinafter.

3. *Land Acquisition-Phase I*

Wherever additional land is required for road improvements, estimate therefor may be framed, got approved by appropriate authority and then land acquisition completed.

4. *Execution of preliminary works-Phase II*

Once the land acquisition is completed, the work of shifting utility lines electric/telephone poles etc., construction of cross drainage works and ancillary work needs to be undertaken. The estimate for these items should be framed on realistic basis in consultation with other agencies and the work executed expeditiously by maintaining proper coordination.

5. *Execution of pavement widening and other connected works-phase III*

After carrying out the work mentioned in para 4 above, the estimate for the next stage work, namely, additional carriageway, median, foot paths, service roads, street lighting etc. may be prepared and got sanctioned by the appropriate authority and the work proceeded subsequently.

6. While forwarding estimates to this Ministry, only those relevant provisions which are legitimate charge to the NH authorities as contained in the Ministry's circular issued from time to time, need be made. It is requested that all proposals of widening of National Highways passing through urban areas be framed keeping the above guidelines in view and the work implemented in phases as explained above.

143.2 BYEPASSES AND PARALLEL SERVICE ROADS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>143.2.1.</u> (142)	NHI/40(1)/68 dt 31.1.69	Maintenance of NH Connecting Two Ends of a Bypass	See Code No. 142
<u>143.2.2.</u> (142)	NH-40 (1)/68 dt 1.5.69	—do—	See Code No. 142
143.2.3.	NHIII-23 (1)/72 dt 19.9.72	Byepasses to NHs-Need to ensure that such Byepasses are not brought within Municipal Limits to Charge Octroi and detain vehicles etc.	143.2/1
<u>143.2.4.</u> (142)	NHIII/P/9/77 dt 30.11.77	Status of Lengths Replaced by NH Byepasses Realignment etc.	See Code No. 142
<u>143.2.5.</u> (142)	NHIII/P/9/77 dt 12.4.82	—do—	See Code No. 142
143.2.6.	RW/NHIII/P/9/77 dt 23.4.82	Discarded Lengths of NHs-Preservation of	143.2/1
<u>143.2.7.</u> (144)	RW/NHIII/Coord/87/84 dt 22.5.84	Review of the Functioning of Byepasses and the need to Protect them from Ribbon Development	143.2/2
143.2.8.	RW/NHIII/P/24/84 dt 25.9.84	Construction of Parallel Service Roads along NH Byepasses by the State Governments	143.2/3
<u>143.2.9.</u> 302	PL-30 (49)/79 dt 29.9.85	Provision of Junctions at the end of Byepasses.	143.2/3

No. NHIII-23 (1)/72

Dated the 19th September, 1972

To

All the State Governments
(Departments dealing with National Highways)

Subject : Bypasses to National Highways—Need to ensure that such bypasses are not brought within Municipal limits to charge octroi and detain vehicles etc.

I am directed to say that it has been brought to the notice of the Government of India that certain local bodies and Municipal Committees have extended their jurisdiction to cover the bypasses to National Highways and have put up octroi barriers even on these bypasses, thus causing detention to vehicles. As the State Governments are doubtless aware, the very purpose of constructing bypasses is to allow free movement to vehicles operating on long distance routes carrying through traffic so that these vehicles do not have to stop at the barriers set up to check payment of Motor Vehicle tax, octroi duty, etc. In fact, it was for this that the National Highway Links Scheme, as embodied in the late Ministry of Transport letter No. PL-13 (7)/51, dated the 16th February 1954 read with the Ministry of Transport and Communications (Department of Transport) letter No. WI-1 (6)/54 dated the 1st June, 1957 laid down the following condition :

"The State Government should ensure that Octrois or any other terminal taxes on through traffic and tolls are not levied by the local body concerned on the link roads maintained and/or developed at Central expenses."

The condition stated above would apply equally to the case of bypasses also, as, if the territorial jurisdiction of the local bodies, particularly those levying octroi, is extended to cover bypasses also, the very object of constructing such bypasses would be defeated.

In the circumstances, I am to request that necessary instructions may kindly be issued to all concerned to ensure that in the interest of the development of road transport, local bodies do not extend their territorial limits to cover bypasses. A copy of the instructions issued may also please be forwarded to this Ministry.

No. RW/NHIII/P/9/77

Dated the 23rd April, 1982

To

All State Governments and Union
Territories dealing with National Highways

Subject : Discarded lengths of National Highways—Preservation of. (Ref, circular No. NHIII/P/9/77 dt. 30.11.77)

As per the present practice, whenever new stretches of National Highways are constructed for improving the existing alignments, removal of kinks, construction of new bridges, diversion of existing roads etc., the old lengths are discarded and the old NH lands get reverted to the State/U.T. Government. It will be appreciated that where such old stretches are close to the newly improved sections, the old alignment and road embankment may serve as additional carriageway for a four-lane highway or even as a diversion, when development/maintenance works are undertaken on the new carriageways.

2. It is, therefore, necessary that before discarding the old lengths, the matter is carefully examined to assess the requirement of four-lane highway, diversion road etc., in each situation as also the potential of the old alignment to serve in this regard. Where it is recognised that the old alignment can be of use, the same should not be reverted to the State but retained as part of the N.H. land.
3. It is requested that these instructions may be brought to the notice of all field officers dealing with the National Highways for necessary action.

No. RW/NHIII/COORD/87/84

Dated the 22nd May, 1984

To

All Chief Engineers dealing with National Highways in the States and Union Territories

Subject : Review of the functioning of bypasses and the need to protect them from ribbon development

A number of bypasses have been constructed at villages, towns and cities on the National Highway system in the past three decades at considerable cost. The purpose of the bypasses is to ensure free and smooth flow of through traffic, avoiding the congested and accident-prone sections through the habitations. It has, however, been observed that, once constructed, these bypasses attract growth of the town along their alignment, soon leading to ribbon development and obstructions from cross-traffic, deterioration in the level of service and reduced safety. The situation at some of the bypasses has so deteriorated that another bypass has become necessary. In order to prevent such situations, it is necessary to take adequate planning and regulatory measures immediately as set forth below.

2. To take a complete stock of the situation, it is first of all necessary to prepare a full inventory of the bypasses on the National Highway system, collecting the information detailed in Appendix I. This will be the basis for all future planning and regulatory measures. The inventory may please be completed and sent to the Ministry within three months, i.e. by the end of August, 1984.
3. The inventory would reveal that some bypasses can be even now saved from further deterioration if the following immediate measures are taken :
 1. Removing encroachments.
 2. Provision of parallel service roads to take care of the local traffic.
 3. Restricting entry of cross-roads only at selected and predetermined locations selectively.
 4. Enforcing planning measures such as 'building lines' and 'control lines' rigidly.

The construction of the parallel service roads is the responsibility of the State Governments as they serve local needs and benefit local users and abutting property owners. The Seventh Five Year Plan for Roads in the State Sector should give a high priority with an earmarked outlay for this purpose. This may please be ensured.

4. It is requested that wide publicity be given to the instructions contained in this circular to all engineers at various levels and the desired information is furnished to the Ministry.

APPENDIX-I

INVENTORY OF BYPASSES

STATE :

S.No.	N.H. No.	Name of village town or city	Year of construction of bypass	Length of bypass (km)	Land width (m)	Carriage-way width (m)	Whether service roads exist	Number of access points on each side	Whether ribbon development has taken place	Whether there are encroachments	Whether there are properly designed inter-sections	Suggestions for improving the Operational characteristics of the facility	Approximate cost of improvement
1	2	3	4	5	6	7	8	9	10	11	12	13	14
								1 2	(1) Partly (2) Fully (3) Not taken place				

No. RW/NHIII/P/24/84

Dated the 25th Sept. 1984

To

The Secretaries of all the States/Union Territories

Subject : Construction of parallel service roads along National Highway Bypasses by the State Governments

State Governments are aware that ribbon development along the National Highways has become a serious problem in recent years and in order to tackle this problem efficiently, construction of service roads requires urgent and serious consideration by the State Government. In order to discharge these liabilities it was decided that State Government will be responsible for providing parallel service roads and meet the cost of land acquisition, construction and future maintenance of the same where the new bypass runs through the municipal limits. If the bypass runs outside the municipal limits, the State Government will construct the parallel service roads at its own cost before allowing extension of municipal limits and urbanisation.

2. In the Transport Development Council meeting held in April 1984, the State representatives expressed difficulties in financing the cost of service roads from their own resources. It was, therefore, felt that it would be appropriate to treat parallel service roads to bypasses as part of N.H. Project and cost of the same met on 50 : 50 basis by the Centre and States concerned.
3. The Ministry has carefully examined the proposal of sharing the cost of parallel service roads on 50 : 50 basis. It is felt that since the allocation of funds for the development of the National Highways at the disposal of Ministry of Shipping & Transport is very meagre, it would not be possible for the Government of India to share the cost of construction of parallel service roads.
4. Ministry also feels that there is scope for State Governments themselves to find resources to construct parallel service roads along bypasses. The cost of construction of service roads along bypasses need not be funded by the State Government out of their Plan allocation for roads but could easily be financed by the Development Authority of the Town/City for which the bypass is to be constructed out of gains to be mobilised by them from rise in prices of land between the Town/City and the bypass. It may specifically be mentioned here that as soon as the bypass is constructed, the land price on either side shoots up and the local Development Authority can easily take advantage of this situation in raising their resources by acquiring cheap land and selling it at higher price after the bypass has been constructed.

No. PL-30 (49)/79

Dated the 29th Sept 1984

To

The Chief Engineers of all States/Union Territories dealing with Roads

Subject : Provision of junctions at the ends of bypasses

The Ministry have been attaching great importance to the removal of deficiencies of road junctions specially on National Highways for streamlining and controlling the conflicting vehicular movements, thus inducing road safety and improved flow conditions. It has, however, been observed during inspections by the Ministry's officers that properly-designed intersections are yet to be constructed at the take-off points of some of the bypasses. It may be emphasised that such locations, if not properly designed, prove potential traffic hazards with increased vulnerability to accidents, apart from adversely affecting the intersection performance in terms of travel speed and travel time. As a matter of correct procedure, these junctions should be improved simultaneously with the construction of bypasses. With this objective in view, the proposals for construction of new bypasses should invariably include provision for improvement of junctions at the end points as well as at any intermediate cross-roads along the bypass alignment, as any subsequent improvement may inevitably lead to bottlenecks in acquisition of right-of-way and other attendant problems apart from escalated cost and delay in execution.

2. In respect of existing bypasses, the inter-sections requiring such treatment should be immediately identified and proposals for their improvement formulated. Provision for such works should get the highest priority in the annual plans.

143.2/4

3. In order to facilitate improvement of the existing intersections along bypasses in a coordinated manner, suitable provisions may please be made, well in advance, in the respective annual plans on the basis of joint site identification by the PWD officers and the Ministry's R.O. Thereafter, the proposals for improvement of the intersections may be formulated on the basis of approved annual provisions and furnished to the Ministry together with complete data as stipulated in Ministry's letter of even No. dated the 25th July, 1984.
-

143.3 BARRIERS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
143.3.1.	NHIII/P/11/76 dt. 28.2.76	Highway Barriers on National Highways	143.3/1
143.3.2.	RW/NHIII/P/29/78 dt. 18.11.80	Highway Barriers on National Highways	143.3/1

No. NHIII/P/11/76

Dated the 28th February, 1976

To

All State Governments and Union Territories
(Departments dealing with National Highways)

Subject : Highway Barriers on National Highways

In supersession of earlier instructions issued vide this Ministry's letter No. WI-43 (2) 66 dated the 28th January 1966, and No. NHI-42 (57) 69 dated the 8th April 1970, 30th January 1971 and 10th March, 1971, I am directed to convey the following instructions regarding erection and operation of highway barriers on National Highways for guidance in future.

2. Erection of Highway Barriers

- 2.1 Highway barriers may be required by various State Government Authorities for controlling movement of commodities, forest produce etc. or checking smuggling of goods, at the boundaries of Administrative Units. Though the practice of putting physical barriers on National Highways is not favoured by this Government, their erection at the present juncture may not altogether be prohibited. As such, State Government Departments dealing with roads may permit a barrier provided the same is considered absolutely necessary. The location of the barrier should be approved by the State Chief Engineer and the same should conform to either of the three type designs contained in IRC : 41-1972 "Type Designs for Check Barriers".
- 2.2 The choice of a design out of the three type designs mentioned above would be based on consideration of the conditions obtaining at site and the volume of traffic required to be handled at any particular location. The barrier should be constructed by the Highway Authority as deposit work at the cost of the authority requiring it.

3. Operation of Highway Barrier

- 3.1 Where a barrier is erected, the check post controlling the gates should function round the clock to avoid inconvenience to through traffic. The barrier gates may be closed to stop a passing vehicle, if and when to be checked, but the gates should be reopened immediately after checking which should be done in the least possible time.
4. It is requested that the contents of this circular may be brought to the notice of all officers in your department engaged on National Highway works.

No. RW/NHIII/P/29/78

Dated the 18th Nov., 1980

To

1. All State Govts./U.T. Admn.
(Deptts. dealing with National Highways)
2. Director General
Border Roads, New Delhi
3. Director General Works,
Central P.W.D., New Delhi

Subject : Highway Barriers on National Highways

I am directed to say that the large number of barriers put up on the National Highways by the State Govts. or their agencies for collection of taxes, controlling unauthorised movement of goods etc. cause serious impediment to free movement of vehicles and goods. In the interest of free and unimpeded flow of traffic along the National Highways, the Ministry had issued detailed instructions in the matter, particularly circular letters No. NHIII/P/11/76 dated 28th Feb. 1976, No. NHIII/P/29/78 dated the 29th Oct. 1979 and 28th February, 1980. The main points made in these circulars were :

Circular No. NHIII/P/11/76 dated 28.2.76

- (i) The practice of putting physical barriers on National Highways is not favoured by this Ministry, but at present juncture the State Govts. may permit a barrier provided the same is considered absolutely necessary.

- (ii) Where permitted, the barrier should conform either of the three type designs contained in IRC : 41-1972 "Type Designs for Check Barriers" and its location approved by the State Chief Engineer.
- (iii) The barrier including the necessary laybys/widening of carriageway etc. should be constructed by the Highway Authority as deposit work at the cost of the agency requiring it.
- (iv) The check posts controlling the gates of the barriers should function round the clock to avoid inconvenience to through traffic. Where the gates are closed to stop a passing vehicle, these should be reopened immediately after checking which should be done in the least possible time.

Circular No. NHIII/P/29/79 dated 18.10.79

- (v) The State Govts. may take immediate steps for the removal/rationalisation of barriers across National Highways except those which may be required for essential purposes such as enforcing law and order.
- (vi) At the inter-State boundary, the concerned State Govts. may arrange to have only one barrier which may be managed by evolving suitable arrangements coordinatedly by the concerned authorities of the Govts. The proposed unified check barrier should, however, not disturb the existing arrangement for barriers erected/to be erected for collection of fees on bridges costing more than Rs. 25 lakhs on National Highways completed and opened to traffic on or after 1st April, 1976.

Circular No. NHIII/P/29/78 dated 28.2.1980

- (vii) The agreement with the President of India for maintenance and development of urban links of National Highways entered into by some of the States *inter alia* includes a condition that the State Govt. shall ensure that Octroi or any other terminal taxes on through traffic and tolls are not levied by the local body concerned on the link roads maintained and/or developed at Central Govt. expenses. Despite this legal requirement, barriers for collection of taxes etc. have been put up on such urban links. The concerned State Govts. may take immediate steps to eliminate/rationalise these barriers on the urban links so that there is least impediment to through traffic.
2. The question about erection of check barriers was also considered by the Transport Development Council at its meeting held on 2nd August, 1980. The Council emphasised that all efforts should be made by the States to unify check barriers along the National Highways having single combined ones at inter-State boundaries and that they should be of proper design with separate lay-byes so as not to hinder movement of the through traffic. It was indicated that the Transport Ministry will be prepared to consider bearing the cost of these improvements in the case of National Highways in the interest of greater overall safety. Accordingly, the State Govts. may look into the existing arrangements of check barriers at the inter-State boundaries, and prepare proposals and cost estimates for combining the barriers into a single one and forward these to the Ministry for consideration.
 3. The State Govts. are requested to extend their cooperation and ensure that impediment to the free movement of vehicles and goods on National Highways are removed by taking immediate steps at the State level to eliminate/rationalise the existing barriers. The Ministry may also please be apprised of the action taken in this regard.

144. RIBBON DEVELOPMENT, ENCROACHMENTS AND EVICTION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
144.1.	NHI-47 (1)/69 dt. 12.5.69	Removal of Unauthorised Occupation on NHs	144/1
144.2.	NHIII/P/24/75 dt. 1.4.76	Removal of Encroachments on NHs	144/1
144.3	NHIII/P/72/76 dt. 13.1.77	Control of Ribbon Development and Removal of Encroachments Along Highways	144/2
144.4.	NHIII/P/72/76 dt. 12.10.78	—do—	144/5
144.5.	NHIII/Misc/57/76 dt. 8.5.80	Reducing Congestion on Major Roads passing through Built-up Areas	144/16
144.6.	NHIII/P/10/76 dt. 19.4.84	Prevention of Encroachments on National Highway Land	144/17
144.7	RW/NHIII/Coord/36/84 dt. 17.5.84	Protection of NH Land against Encroachments	144/26
<u>144.8.</u> 143.2.	NHIII/Coord/87/84 dt. 22.5.84	Review of Sanction of Bypasses and Need to Protect them from Ribbon Development	See Code No. 143.2.
144.9	NHIII/P/10/76 dt. 4.6.84	Prevention of Encroachments on NH Land	144/27

No. NHI-47 (1)/69

Dated the 12th May, 1969

To

The Secretary to the Govt. of Uttar Pradesh, Public Works (Electric) Department, Lucknow

Subject : Removal of unauthorised occupation on National Highways

I am directed to refer to your letter No. 50 GIE/XXIII-PWE-121 N/68, dated the 25th February, 1969 (enclosed) and to say that for the purposes of payment of court fee in all cases of unauthorised encroachments on National Highway land, full value of the land and the period of encroachment should be shown. The expenditure by way of stamp fee etc. may be incurred out of the Maintenance and Repairs grant for National Highways.

Enclosure to letter No. NHI-47 (1)/69 dt. 12.5.69

LETTER NO. 50 GIE/XXIII-PWD-121 N/68, DATED THE 25TH FEBRUARY, 1969, FROM THE DEPUTY SECRETARY UTTAR PRADESH GOVERNMENT. PUBLIC WORKS (E) DEPARTMENT, LUCKNOW ADDRESSED TO THE SECRETARY TO THE GOVERNMENT OF INDIA. MINISTRY OF TRANSPORT AND SHIPPING (ROADS WING).

Subject : Removal of unauthorised occupation on National Highways

With reference to the Government of India's letter No. NHI-47 (1)/67, dated the February 4, 1969 on the subject mentioned above, I am directed to say that large numbers of encroachments exist on National Highways in Uttar Pradesh. It is proposed to file suits to remove them from the National Highway land. The State Chief Engineer, Public Works Department has stated that several Executive Engineers, have reported that the stamp fee alone is as high as about Rs. 800/- per suit specially for encroachments in urban areas and big towns where the cost of land is very high. The value of suits for the purpose of calculating court fee is taken on the following items :

- (a) Cost of land at present market rate excluding cost of structures;
- (b) Pendentalite and future damages tentatively fixed; and
- (c) Rent or damages from the date of occupation to the date of suit.

Besides some District Government Counsels (Civil) have also included relief of mandatory injunction and court fee to be paid on it. The State Chief Engineer is therefore of the opinion that the suits may be filed with nominal court fee and that the remaining fee may be paid in future when sufficient funds are made available or when asked by the courts.

In regard to the above, the State Government is of the opinion that as the land on which encroachments exist is vested in the Union Government, it will not be desirable on their part to conceal the facts by reducing the cost of land and claiming less rent by reducing the period of rent, I am accordingly to request that the Government of India may kindly be moved to consider the matter and communicate their decision. In case the Government of India decide that it is not necessary to reduce the value of land or the period of occupation, sufficient funds to cover the expenditure may also kindly be made available for the purpose. I am also to request that the Government of India's decision in the matter may kindly be communicated to the State Government at early date.

No. NHIII/P/24/75

Dated the 1st April, 1976

To,

All State Governments, including Goa, Daman and Diu
(Departments dealing with National Highways)

Subject : Removal of encroachments on National Highways

I am directed to say that in the context of the present emergency the need for clearing the National Highways of all encroachments and thereby eliminating nuisance and accident-prone spots and ensuring free flow of traffic thereby increasing the capacity of roads has assumed greater urgency and importance. The question of tackling this problem has accordingly been examined in consultation with the Ministry of Law, who have made the following observations :—

- (1) Various remedies are open to the State Governments to get the National Highways cleared of obstructions and that most speedy remedy is under Section 133 of the Criminal Procedure Code. In order to bring the case under Section 133, the prosecution has to prove that the land in question is either a public way or a public place.
 - (2) Encroachment upon a public road is an obstruction to the public path and it is a nuisance in itself under section 269 of the Indian Penal Code. No argument by a user can justify an encroachment upon a public way. The question of sufficient width of the road being left in support of the encroachment for public use is no ground for allowing encroachment or obstruction to continue. It is the duty of the Magistrate to come to a finding whether the claim of the person complaining of such encroachment is bonafide or not. The question of possession is relevant for this purpose.
 - (3) Criminal proceedings may, therefore, be initiated against the wrong doer under the various provisions of Indian Penal Code, Criminal Procedure Code and such of the Police Acts as are applicable to Central subjects like National Highways which are a Union subject under the Constitution.
 - (4) Section 291 of the Indian Penal Code punishes a person continuing a nuisance after he is enjoined by a public servant not to repeat or continue it. Sections 142 and 143 of the Code of Criminal Procedure empower a Magistrate to forbid an act causing a public nuisance. The Civil Procedure Code also empowers a court to issue temporary injunction.
2. This matter was also placed before the State Chief Engineers at their meeting held at Hyderabad on 6.1.1976 and they had no comments to offer. I am accordingly to request you kindly to take necessary action in the matter for the removal of encroachments on National Highway lands on the lines indicated above. The contents of this communication may also be brought to the notice of all concerned with the development and maintenance of National Highways under the State Public Works Department to facilitate speedier action. It will be greatly appreciated if a copy of the instructions issued will be endorsed to this Ministry also.

144.3

No. NHIII/P/72/76

Dated the 13th Jan., 1977

To

1. All State Govts. & Union Territories
(Departments dealing with Highways)
2. All State Chief Engineers/Addl. Chief Engineers/Principal Engineers dealing with Highways
3. Engineer-in-Chief, C.P.W.D. and Army Headquarters,
D.G.B.R.

Subject : Control of Ribbon Development and removal of encroachments along highways

In supersession of the instruction communicated in the circulars mentioned below, I am directed to issue the following consolidated guideline for control of ribbon development and removal of encroachment along highways specially National Highways and such centrally sponsored highways as the Lateral Road and the Strategic Road.

1. PL-12 (2)/52, dated 10.10.52
2. WII-2 (57)/61, dated 6.10.61
3. WI-43 (3)/63 dated 24.7.63
4. PL-7 (11)/57 dated 1.1.66

2. Ribbon Development along arterial highways has become an acute problem near developing towns. This is further accentuated by uncontrolled proliferation of access points to the highway. In some of the congested towns along National Highway where ribbon development has already taken place, bye-passes have been provided but unless adequate measures are taken to prevent recurrence of ribbon development, no lasting solution is possible. Some of the measures which should be given immediate consideration to control further deterioration of the situation are :

- (a) Provision of adequate land width for future development
- (b) Provision for service road for traffic which is purely local in character.
- (c) Control of access
- (d) Control of building activities
- (e) Control of roadside advertisement
- (f) Prevention of encroachments and their speedy removal.

3. Access to arterial highways should be restricted to predetermined points and in urban and industrial areas this should be done by constructing parallel service roads on either side. The necessary land for the service road should be acquired simultaneously with the acquisition of land for the highway proper. The general requirement of land width for highways is indicated in Table 1 below :—

TABLE 1 : LAND WIDTH FOR DIFFERENT CLASSES OF ROAD

Class of Roads	Land width in Metre							
	Plain & Rolling Country				Mountaneous & Steep Terrain			
	Rural Areas		Urban Areas		Rural Areas		Urban Areas	
	Normal	Range	Normal	Range	Normal	Exceptional	Normal	Exceptional
National Highways and State Highway	45	30-60	30	30-60	24	18	20	18
Major District Road	25	25-30	20	15-25	18	15	15	12
Other District Road	15	15-25	15	15-20	15	12	12	9
Village Road	12	12-18	10	10-15	9	9	9	9

Parallel service roads for 2 way traffic should be planned as an essential part of any scheme for erecting buildings and factories on the land abutting the highway and provision for these made in the layout from the very beginning. In this connection, I am to bring to your notice the recommendations of the Transport Development Council of its fourth meeting held in April 1963 which are as below :

“The Council recommends that parallel service roads should be constructed in factory areas alongside the National and State Highways to avoid congestion on these Highways. The State Govt. could ensure compliance with this requirement by stipulating a suitable condition at the time of granting permission to the setting of factories and other building”.

4. As service roads are intended to meet mainly local traffic needs, these could be constructed by the concerned Road Authority who can, if they so desire consider and examine possibility of charging some fee from the owners of the factories/buildings to recoup the cost by adopting some suitable necessary procedure as admissible. In case of the suitable urban links on National Highways through towns having populations of 20,000 or more, the Central Govt. would discharge the responsibilities conforming the scheme vide this letter No. NHIII/P/16/76 dated 17th March, 1976 and to the consequent agreement.

5. Access Points

- 5.1 In urban areas, the spacing of access to Arterial highways should wherever possible be restricted to 500 metre interval. If an highway is likely to be developed as Expressway/Motorway the spacing should be 1000 metre.
- 5.2 In rural areas spacings of connections from parallel service roads and of intersection should not be closer than 750 m. Individual driveways to private properties other than petrol pumps should not be spaced closer than 300 metre from each other or from an intersection. Regarding petrol pumps practice recommended in IRC 12 & 13 should be followed. On highways with dual carriageway median openings should generally be limited to intersection with public roads and should not be permitted for individual business needs. Where inter-sections are far apart, median openings may be provided at intervals of 2 km for permitting U-turns and diversion of traffic to one of the carriageways at times of emergency or major repairs.
- 5.3 A reference may be made to IRC : 62-1976 “Guidelines for Control of Access on Highways” for general guidance in other situations.
- 5.4 Designs of all access points should conform to the minimum geometric standards required for safety at the particular location and adequate warning should be provided through Road Signs and Markings.
- 5.5 Prior permission of the Ministry should be obtained before permitting new access points on National Highways other than those provided in accordance with policy mentioned above.

6. Control of Building Activities

- 6.1. In order to prevent overcrowding and preserve sufficient space for future road improvement, it is

desirable to lay down restrictions to regulate building activities along arterial highways. Such measures will help in securing adequate sight distance and preserve the aesthetic value of the highway besides ensuring free flow of traffic. It is desirable that within a prescribed distance from the highway no building activity is allowed or undertaken. This distance from road is defined by a hypothetical line called the "Building Line". Beyond this line it is desirable that buildings of height exceeding 13 metre above road level are not built for a further distance defined by what are called "Control Lines". The minimum desirable standard for "Building Lines" and "Control Lines" for various types of roads are given in Table 2.

TABLE 2 : STANDARDS FOR BUILDING LINES AND CONTROL LINES

Class of Road	Plain and Rolling Terrain			Mountaneous and Steep Terrain			
	Rural Areas		Urban & Industrial Areas	Distance between Building line and Roadland boundary			
	Width between Building Lines (overall width) (metre)	Width between control lines (overall width) (metre)	Distance between Building Line and Road land boundary (set back distance) (metre)	Rural Areas		Urban Areas	
				Normal (metre)	Exceptional (metre)	Normal (metre)	Exceptional (metre)
1. National & State Highways	80	150	3-6	5	3	5	3
2. Major District Roads	50	100	3	5	3	5	3
3. Other District Roads	25/30*	35	—	5	3	5	3
4. Village Roads	25	30	—	5	3	5	3

* If the land width is equal to the width between building lines indicated in this column, the building lines shall be set back 2.5 metre from the road land boundary lines

Generally the building and control lines would be symmetrical about the road way. These should be strictly enforced by State Govts. along all National Highways/Strategic Roads while approving schemes of development and specifying land use. Necessary legislation to enforce these where required, may also be enacted.

6.2. No structure of any kind, save the ones required for the development and operation of the highway or those for which the State's have been authorised separately, should be permitted to be put up on National Highway road land without the prior approval of the Ministry.

7. Control on Advertisements

7.1. Erection of hoardings, advertisement boards, statues etc. are a source of distraction and cause of accidents on highways and should not be permitted on National Highway land. Only signs and notices of the types mentioned in para 3.3 of the IRC : 46-1972 "A Policy on Roadside Advertisements" may be permitted if they do not interfere with visibility along the Highway and are atleast 100 m from any road junction, bridges or another crossing. The general considerations given in the above mentioned IRC policy should be kept in view.

8. Prevention and Removal of Encroachments

8.1. It is noticed that a number of encroachment have developed in the past on arterial highways. It is essential that urgent action is taken to remove all the existing encroachments expeditiously so as to eliminate nuisance and ensure safe and free flow of traffic. Ministry of Law has advised that any or all of the following methods may be used to remove encroachment on highways.

- (1) Action be taken under section 133 of the Criminal Procedure Code. In order to bring the case under section 133, the prosecution has to prove that the land in question is either a public way or a public place.
- (2) Encroachment upon a public road is an obstruction to the public path and it is a nuisance in itself under Section 269 of the Indian Penal Code. No argument by a user can justify an encroachment upon a public way. The question of sufficient width of the road being left in support of the encroachment for public use is no ground for

allowing encroachment or obstruction to continue. It is the duty of the Magistrate to come to a finding whether the claim of the person complaining of such encroachment is bonafide or not. The question of possession is relevant for this purpose.

- (3) Criminal proceedings may, be initiated against the wrong doer under the various provision of Indian Penal Code, Criminal Procedure Code and such of the Police Acts as are applicable to Central subjects like National Highways which are a Union subject under the Constitution.
 - (4) Section 291 of Indian Penal Code punishes a person continuing a nuisance after he is enjoined by a public servant not to repeat or continue it. Sections 142 and 143 of the Code of Criminal Procedure empower a Magistrate to forbid an act causing a public nuisance. The Civil Procedure Code also empowers a court to issue temporary injunction. To be able to expedite removal of encroachments each P.W.D. division must prepare accurate land maps and keep them handy for checking and for producing in evidence.
9. The need and urgency of taking suitable legislative measures for restricting ribbon development along highways in the country have been brought to the notice of the State Govts. on several occasions in the past. In regard to the framing of Central legislation for the prevention of ribbon development along National Highways, it has not been possible to make a headway so far, as the requisite resolutions under Article 252 (1) of the Constitution are still awaited from several States. Since there is an urgent need for a uniform pattern of enactment, it is desirable that all States empower the Central Govt. to legislate a common law applicable throughout the country, so far as National Highways are concerned. This may please be expedited.
10. The content of this communication, with suitable instructions, may be brought to the notice of all concerned to ensure speedy action.

144.4

No. NHIII/P/72/76

Dated the 12th Oct., 1978

To

All State Govts/Union Territories.
(Dealing with National Highways)

Subject : Control of ribbon development and removal of encroachment on National Highway

I am directed to refer to para 8 of this Ministry's circular letter of even number dated 13th Jan., 1977 on the subject mentioned above and to say that the matter has been considered further in consultation with the Ministry of Law who have advised that Public Premises (Eviction of Unauthorised Occupants) Act 1971 can also be made use of for removal of encroachment on National Highways. A copy of this Act and the Rules framed there under as published in Part II Section III-Sub Section I of Gazette extraordinary is enclosed for ready reference. The act *inter-alia* envisages appointment of Estate Officers for implementing the above, Act. It is therefore, requested that in case the State Govt. like to take recourse to the Public Premises (Eviction of Unauthorised Occupants) Act 1971 for the purpose of Eviction of Unauthorised Occupants (encroachers) from National Highways, this Ministry may be informed of the names of the Gazetted Officers of the State Public Works Department who may be appointed as Estate Officers under the Act.

Enclosures to letter No. NHIII/P/72/76

Dated 12.10.78

Registered No. D. 221

THE GAZETTE OF INDIA

EXTRAORDINARY
PART II- SECTION I
PUBLISHED BY AUTHORITY

No. 40 New Delhi, Tuesday, August 24, 1971/BHADRA 2, 1893

Separate paging is given to this Part in order that it may be filed as a separate compilation.

MINISTRY OF LAW AND JUSTICE
(Legislative Department)

New Delhi, the 24th August, 1971/Bhadra 2, 1893 (Saka)

The following Act of Parliament received the assent of the President on the 23rd August, 1971, and is hereby published for general information :

An Act to provide for the eviction of unauthorised occupants from public premises and for certain incidental matters.

THE PUBLIC PREMISES (EVICTION OF UNAUTHORISED OCCUPANTS) ACT 1971

No. 40 of 1971

(23rd August, 1971)

Be it enacted by Parliament in the Twenty-second Year of the Republic of India as follows :—

Short title, extent
and commencement

1. (1) This Act may be called the Public Premises (Eviction of Unauthorised Occupants) Act, 1971.
- (2) It extends to the whole of India.
- (3) It shall be deemed to have come into force on the 16th day of September, 1958 except sections 11.19 and 20 which shall come into force at once.

Definitions

2. In this Act, unless the context otherwise requires :—

- (a) "corporate authority" means :—

- (i) any Company or Corporation referred to in sub-clause (1), or
- (ii) the Corporation or any committee or the Authority referred to in sub-clause (2), of clause (e) of this section;

THE GAZETTE OF INDIA EXTRAORDINARY (Part II)

- (b) "estate officer" means an officer appointed as such by the Central Government under section 3;

- (c) "premises" means any land or any building or part of a building and includes :—

- (i) the garden, grounds and outhouses, if any, appertaining to such building or part of a building, and
- (ii) any fittings affixed to such building or part of a building for the more beneficial enjoyment thereof;

- (d) "prescribed" means prescribed by rules made under this Act;

- (e) "public premises" means any premises belonging to or taken on lease or requisitioned by, or on behalf of, the Central Government, and includes :—

- (1) Any premises belonging to, or taken on lease by, or on behalf of :—

- (i) any company as defined in section 3 of the Companies Act, 1956 in which not less than fifty one per cent of the paid-up share capital is held by the Central Government; and

- (ii) any Corporation (not being a company as defined in section 3 of the Companies Act, 1956 or a local authority) established by or under a Central Act and owned or controlled by the Central Government; and

- (2) in relation to the Union territory of Delhi :—

- (i) any premises belonging to the Municipal Corporation of Delhi or any municipal committee or notified area committee, and
- (ii) any premises belonging to the Delhi Development Authority whether such premises are in the possession of or leased out by the said Authority;

- (f) "rent", in relation to any public premises, means the consideration payable periodically for the authorised occupation of the premises, and includes :—

- (i) any charge for electricity, water or any other services in connection with the occupation of the premises;

SEC. 1 THE GAZETTE OF INDIA EXTRAORDINARY 303

- (ii) any tax (by whatever name called) payable in respect of the premises.

Where such charge or tax is payable by the Central Government or the corporate authority;

- (g) "unauthorised occupation", in relation to any public premises, means the occupation by any person of the public premises without authority for such occupation, and includes the continuance in occupation by any person of the public premises after the authority (whether by way of grant or any other mode of transfer) under which he was allowed to occupy the premises has expired or has been determined for any reason whatsoever.

1 of 1956

1 of 1956

Appointment of
estate officers

3. The Central Government may, by notification in the official Gazette :—

- (a) appoint such persons, being gazetted officers of Government or officers of equivalent rank of the corporate authority, as it thinks fit, to be estate officers for the purposes of this Act; and
- (b) define the local limits within which, or the categories of public premises in respect of which, the estate officers shall exercise the powers conferred, and perform the duties imposed, on estate officers by or under this Act.

Issue of notice
show cause against
order of eviction

4. (1) If the estate officer is of opinion that any persons are in unauthorised occupation of any public premises and that they should be evicted, the estate officer shall issue in the manner hereinafter provided a notice in writing to calling upon all persons concerned to show cause why an order of eviction should not be made.

(2) The notice shall :—

- (a) specify the grounds on which the order of eviction is proposed to be made; and
- (b) require all persons concerned, that is to say, all persons who are, or may be, in occupation of, or claim interest in, the public premises, to show cause, if any, against the proposed order on or before such date as is specified in the notice, being a date not earlier than ten days from the date of issue thereof.

(3) The estate officer shall cause the notice to be served by having it affixed on the outer door or some other conspicuous part of the public premises, and in such other manner as may be prescribed, whereupon the notice shall be deemed to have been duly given to all persons concerned.

(4) Where the estate officer knows or has reasons to believe that any persons are in occupation of the public premises, then, without prejudice to the provisions of sub-section (3), he shall cause a copy of the notice to be served on every such person by post or by delivering or tendering it to that person or in such other manner as may be prescribed.

Eviction of unauthorised
occupants

5. (1) If, after considering the cause, if any, shown by any person in pursuance of a notice under section 4 and any evidence he may produce in support of the same and after giving him a reasonable opportunity of being heard, the estate officer is satisfied that the public premises are in unauthorised occupation, the estate officer may make an order of eviction, for reasons to be recorded therein, directing that the public premises shall be vacated, on such date as may be specified in the order, by all persons who may be in occupation thereof or any part thereof, and cause a copy of the order to be affixed on the outer door or some other conspicuous part of the public premises.

(2) If any person refuses or fails to comply with the order of eviction within thirty days of the date of its publication under sub-section (1), the estate officer or any other officer duly authorised by the estate officer in this behalf may evict that person from, and take possession of, the public premises and may, for that purpose, use such force as may be necessary.

Disposal of property
left on public premises
by unauthorised
occupants

6. (1) Where any persons have been evicted from any public premises under section 5, the estate officer may, after giving fourteen days notice to the persons from whom possession of the public premises has been taken and after publishing the notice in at least one newspaper having circulation in the locality, remove or cause to be removed or disposed of by public auction any property remaining on such premises.

(2) Where any property is sold under sub-section (1), the sale proceeds thereof shall, after deducting the expenses of the sale and the amount, if any, due to the Central Government or the corporate authority on account of arrears of rent or damages or costs, be paid to such per-

son or persons as may appear to the estate officer to be entitled to the same;

Provided that where the estate officer is unable to decide as to the person or persons to whom the balance of the amount is payable or as to the apportionment of the same, he may refer such dispute to the civil court of competent jurisdiction and the decision of the court thereon shall be final.

Power to require
payment of rent or
damages in respect
of public premises

7. (1) Where any person is in arrears of rent payable in respect of any public premises, the estate officer may, by order, require that person to pay the same within such time and in such instalments as may be specified in the order.
- (2) Where any person is, or has at any time been, in unauthorised occupation of any public premises, the estate officer may, having regard to such principles of assessment of damages as may be prescribed, assess the damages on account of the use and occupation of such premises and may, by order, require that person to pay the damages within such time and in such instalments as may be specified in the order.
- (3) No order under sub-section (1) or sub-section (2) shall be made against any person until after the issue of a notice in writing to the person calling upon him to show cause within such time as may be specified in the notice, why such order should not be made, and until his objections, if any, and any evidence he may produce in support of the same, have been considered by the estate officer.

Powers of estate
officers
5 of 1908

8. Any estate officer shall, for the purpose of holding any inquiry under this Act, have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908, when trying a suit in respect of the following matters, namely :—
 - (a) summoning and enforcing the attendance of any person and examining him on oath.
 - (b) requiring the discovery and production of documents;
 - (c) any other matter which may be prescribed.

Appeals

9. (1) An appeal shall lie from every order of the estate officer made in respect of any public premises under section 5 or section 7 to an appellate officer who shall be the district judge of the district in which the public premises are situated or such other judicial officer in that district of not less than ten years' standing as the district judge may designate in this behalf.
- (2) An appeal under sub-section (1) shall be preferred :—
 - (a) in the case of an appeal from an order under section 5, within fifteen days from the date of publication of the order under sub-section (1) of that section; and
 - (b) in the case of an appeal from an order under section 7, within fifteen days from the date on which the order is communicated to the appellant :

Provided that the appellate officer may entertain the appeal after the expiry of the said period of fifteen days, if he is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

- (3) Where an appeal is preferred from an order of the estate officer the appellate officer may stay the enforcement of that order for such period and on such conditions as he deems fit.
- (4) Every appeal under this section shall be disposed of by the appellate officer as expeditiously as possible.
- (5) The costs of any appeal under this section shall be in the discretion of the appellate officer.
- (6) For the purpose of of this section, a presidency-town shall be deemed

to be a district and the chief judge or the principal judge of the city civil court therein shall be deemed to be the district judge of the district.

Finality of orders

10. Save as otherwise expressly provided in this Act, every order made by an estate officer or appellate officer under this Act shall be final and shall not be called in question in any original suit, application or execution proceeding and no injunction shall be granted by any court or other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.

Offences and penalty

11. (1) If any person who has been evicted from any public premises under this Act again occupies the premises without authority for such occupation, he shall be punishable with imprisonment for a term which may extend to one year, or with fine which may extend to one thousand rupees, or with both.
- (2) Any magistrate convicting a person under sub-section (1) may make an order for evicting that person summarily and he shall be liable to such eviction without prejudice to any other action that may be taken against him under this Act.

Power to obtain information

12. If the estate officer has reason to believe that any persons are in unauthorised occupation of any public premises, the estate officer or any other officer authorised by him in this behalf may require those persons or any other person to furnish information relating to the names and other particulars of the persons in occupation of the public premises and every person so required shall be bound to furnish the information in his possession.

Liability of heirs and legal representatives

13. (1) Where any person against whom any proceeding for the determination of arrears of rent or for the assessment of damages is to be or has been taken dies before the proceeding is taken or during the pendency thereof, the proceeding may be taken or, as the case may be, continued against the heirs or legal representatives of that person.
- (2) Any amount due to the Central Government or the corporate authority from any person whether by way of arrears of rent or damages or cost shall, after the death of the person, be payable by his heirs or legal representatives but their liability shall be limited to the extent of the assets of the deceased in their hands.

Recovery of rent etc., as an arrear of land revenue

14. If any person refuses or fails to pay the arrears of rent payable under sub-section (1) of section 7 or the damages payable under sub-section (2) of that section or the costs awarded to the Central Government or the corporate authority under sub-section (5) of section 9 or any portion of such rent, damages or costs, within the time, if any, specified therefor in the order relating thereto, the estate officer may issue a certificate for the amount due to the Collector who shall proceed to recover the same as an arrear of land revenue.

Bar of jurisdiction

15. No court shall have jurisdiction to entertain any suit or proceeding in respect of the eviction of any person who is in unauthorised occupation of any public premises or the recovery of the arrears of rent payable under sub-section (1) of Section 7 or the damages payable under sub-section (2) of that section or the costs awarded to the Central Government or the corporate authority under sub-section (5) of section 9 or any portion of such rent, damages or costs.

Protection of action taken in good faith

16. No suit, prosecution or other legal proceeding shall lie against the Central Government or the corporate authority of the appellate officer or the estate officer in respect of anything which is in good faith done or intended to be done in pursuance of this Act or of any rules or orders made thereunder.

Delegation of powers

17. The Central Government may, by notification in the official Gazette, direct

that any power exercisable by it under this Act shall, subject to such conditions, if any, as may be specified in the notification, be exercisable also by a State Government or an officer of the State Government.

Power to make rules

18. (1) The Central Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act.
- (2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely :—
- (a) the form of any notice required or authorised to be given under this Act and the manner in which it may be served;
 - (b) the holding of inquiries under this Act;
 - (c) the distribution and allocation of work to estate officers and the transfer of any proceeding pending before an estate officer to another estate officer;
 - (d) the procedure to be followed in taking possession of public premises;
 - (e) the manner in which damages for unauthorised occupation may be assessed and the principles which may be taken into account in assessing such damages;
 - (f) the manner in which appeals may be preferred and the procedure to be followed in appeals;
 - (g) any other matter which has to be or may be prescribed.
- (3) Every rule made under this section shall be laid, as soon as may be after it is made, before each House of Parliament while it is in session for a total period of thirty days which may be comprised in one session or in two successive sessions, and if, before the expiry of the session in which it is so laid or the session immediately following, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

32 of 1958 Repeal

19. The Public Premises (Eviction of Unauthorised Occupants) Act, 1958 is hereby repealed.

32 of 1958

20. Notwithstanding any judgements, decree or validation order of any court, anything done or any action taken (including rules or orders made, notices issued, evictions ordered or effected, damages assessed, rents or damages or costs recovered and proceedings initiated) or purported to have been done or taken under the Public Premises (Eviction of Unauthorised Occupants) Act, 1958 (hereafter in this section referred to as the 1958-Act) shall be deemed to be as valid and effective as if such thing or action was done or taken under the corresponding provisions of this Act which, under sub-section (3) of section 1 shall be deemed to have come into force on the 16th day of September, 1958, and accordingly :—
- (a) no suit or other legal proceeding shall be maintained or continued in any court for the refund of any rent or damages or costs recovered under the 1958 Act where such refund has been claimed merely on the ground that the said Act has been declared to be unconstitutional and void; and
 - (b) no court shall enforce a decree or order directing the re-fund of any rent or damage or costs recovered under the 1958-Act merely on the ground that the said Act has been declared to be unconstitutional and void.

N.D.P. NAMBOODIRIPAD
Jt. Secy.

The Gazette of India
EXTRAORDINARY

PART II — SECTION 3 — SUB-SECTION (i)

PUBLISHED BY AUTHORITY

No. 228 NEW DELHI, MONDAY, DECEMBER 13, 1971/AGRAHAYANA 22, 1893

Separate paging is given to this Part in order that it may be filed as a separate compilation

MINISTRY OF WORKS & HOUSING

NOTIFICATION

New Delhi, the 25th November 1971

G.S.R. 1883-In exercise of the powers conferred by section 18 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 (40 of 1971), the Central Government hereby makes the following rules, namely :—

1. Short title : These rules may be called the Public Premises (Eviction of Unauthorised Occupants) Rules, 71.
2. Definitions : In these rules unless the context otherwise requires :—
 - (a) "Act" means the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 (40 of 71)
 - (b) "Form" means a form appended to these rules;
 - (c) All other words and expressions used hereinafter but not defined herein shall have the same meaning as respectively assigned to them in the Act.
3. Form of notices and orders — A notice or order under the Act shall be in one of the appropriate forms appended to these rules.
4. Manner of service of notices and orders :— (1) In addition to any mode of service specified in the Act, a notice issued under sub-section (i) of section 4 or sub-section (1) of section 6 or sub-section (1) or (2) of section 7 or sub-section (i) of section 13 of the Act shall be served by delivering or tendering a copy of the notice to the person for whom it is intended or to any adult member of his family, or by sending it by registered post acknowledgment due in a letter addressed to that person at his usual or last-known place of residence or business.
 - (2) Where the copy of the notice under sub-rule (1) is delivered or tendered, the signature of the person to whom the copy is so delivered or tendered should be obtained in token of acknowledgment of the service.
 - (3) In respect of a notice issued under sub-section (1) of section 4 or sub-section (1) of section 6 or sub-section (1) or (2) of section 7 or sub-section (1) of section 13 of the Act, where the person or the adult member of the family of such person refuses to sign the acknowledgment, or where such person cannot be found after using all due and reasonable diligence, and there is no adult member of the family of such person, a copy of the notice shall be affixed on the outer door or some other conspicuous part of the ordinary residence or usual place of business of such person and the original shall be returned to the estate officer who issued the notice, with a report endorsed thereon or annexed thereto stating that a copy has been so affixed, the circumstances under which it was done so and the name and address of the person, if any, by whom the ordinary residence or usual place of business was identified and in whose presence the copy was affixed.
 - (4) (i) If a notice issued under sub-section (1) of section 4 or sub-section (1) or (2) of section 7 or sub-section (1) of section 13 of the Act cannot be served in the manner provided in sub-rule (1), the estate officer may, if he thinks fit, direct that such notice shall also be published in at least one newspaper having circulation in the locality and he may also proclaim the contents of any notice in the locality by beat of drum.
5. Holding of inquiries :— (1) Where any person on whom a notice or order under this Act has been served desires to be heard through his representative, he should authorise such representative in writing.
 - (2) The estate officer shall record the summary of the evidence tendered before him. The summary of such evidence and any relevant documents filed before him shall form part of the records of the proceedings.

6. **Transfer of pending proceedings :—** (1) On the application of any person to whom a notice under the Act has been served and after hearing him, if he desires to be heard, or of its or his own motion, the Central Government or any Gazetted Officer especially authorised by the Central Government in this behalf by notification in the Official Gazette may at any stage transfer any proceeding pending before an estate officer for disposal of the same.
- (2) Where any proceeding has been transferred under sub-rule (1), estate officer who thereafter is in charge of such proceeding may, subject to any special directions in the order of transfer, either re-start it or proceed from the point at which was transferred.
7. **Manner of taking possession of Public Premises :—** (1) If any obstruction is offered, or is in the opinion of the estate officer likely to be offered, to the taking possession of any public premises under the Act, the estate officer or any other officer duly authorised by him in this behalf may obtain necessary police assistance.
- (2) Where any public premises of which possession is to be taken under the Act is found locked, the estate officer or any other officer duly authorised by him in this behalf may either seal the premises or in the presence of two witnesses break open the locks or open or cause to be opened any door, gate or other barrier and enter the premises :
- Provided that :—**
- (1) no entry shall be made into, or possession taken of, a public premises before sunrise or after sunset;
- (2) where any public premises is forced open, an inventory of the articles found in the premises shall be taken in the presence of two witnesses.
8. **Assessment of damages :—** In assessing damages for unauthorised use and occupation of any public premises the estate officer shall take into consideration the following matters namely :—
- (a) the purpose and the period for which the public premises were in unauthorised occupation.
- (b) the nature, size and standard of the accommodation available in such premises;
- (c) the rent that would have been realised if the premises had been let on rent for the period of unauthorised occupation to a private person;
- (d) any damage done to the premises during the period of unauthorised occupation;
- (e) any other matter relevant for the purpose of assessing the damages.
9. **Procedre in appeals :—** (1) An appeal preferred under section 9 of the Act shall be in writing, shall set forth concisely the grounds of objection to the order appealed against, and shall be accompanied by a copy of such order.
- (2) On receipt of the appeal and after calling for and perusing the record of the proceedings before the estate officer, the appellate officer shall appoint a time and place for the hearing of the appeal and shall give notice thereof to the estate officer against whose orders the appeal is preferred, to the appellant and to the head of the department or authority in administrative control of the premises.
10. **Repeal :—** The Public Premises (Eviction of Unauthorised Occupants) Rules, 1958 is hereby repealed.

FORM 'A'

Form of notice under sub-section (1) of section 4 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas I, the undersigned, am of opinion, on the grounds specified below, that you are in unauthorised occupation of the public premises mentioned in the Schedule below and that you should be evicted from the said premises :

Grounds

Now, therefore, in pursuance of sub-section (1) of section 4 of the Act, I hereby call upon you to show cause on or before the * why such an order of

eviction should not be made.

Schedule

Date

Signature and seal of the Estate Officer

(*This date should be a date not earlier than ten days from the date of issue of the notice).

FORM "B"

Order under sub-section (1) of section 5 of the Public Premises
(Eviction of Unauthorised Occupants) Act, 1971.

Whereas I, the undersigned, am satisfied for the reason recorded below that Shri/Shrimati/Kumari is/are in **unauthorised occupation** of the public premises specified in the Schedule below.

Reasons

Now, therefore, in exercise of the powers conferred on me under sub-section (1) of section 5 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971. I hereby order the said Shri/Shrimati/Kumari and all persons who may be in occupation of the said premises or any part thereof to vacate the said premises within thirty days of the date of publication of this order. In the event of refusal or to comply with this order within the period specified above, the said Shri/Shrimati/Kumari and all other persons concerned are liable to be evicted from the said premises, if need be, by the use of such force as may be necessary.

Schedule

Date

Signature and Seal of the Estate Officer

FORM "C"

Form of notice under sub-section (1) of section 6 of the Public Premises
(Eviction of Unauthorised Occupants) Act, 1971.

Shri/Shrimati/Kumari

Whereas on the you were evicted from the public premises described in the Schedule below which was unauthorisedly occupied by you.

Now, therefore, in exercise of the powers conferred on me by sub-section (1) of section 6 of the Act. I hereby give you notice that after fourteen days of the service of this notice on you, any property remaining on the said premises will be liable to be removed or disposed of by public auction. In case you desire to take possession of your property and to remove the same from the said premises, you will be permitted to do so on written authority from the undersigned provided any arrears of rent/damages/costs due from you are paid within the said period of fourteen days.

Schedule

Date

Signature and Seal of the Estate Officer

FORM "D"

Notice under sub-section (3) of Section 7 of the Public Premises
(Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas you are/were in occupation of the public premises described in the Schedule below :

And whereas a sum of Rs. being the arrears of rent from the day of 197 ,

upto the day of 197 , (both days inclusive) in respect of the said premises is due and payable by you and to the Government;

Now, therefore, in pursuance of sub-section (3) of section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971. I hereby call upon you to show cause on or before the why an order requiring you to pay the said arrears of rent should not be made.

Schedule

Date

Signature and Seal of the Estate Officer

FORM "E"

Form of Order under sub-section (1) of section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas you are/were in occupation of the public premises described in the Schedule below;

And whereas, by a written notice dated you were called upon to show cause on or before why an order requiring you to pay a sum of Rs. being the rent payable in respect of the said premises should not be made;

And, whereas, I have considered your objection and/or the evidence produced by you;

And whereas you have not made any objections or produced any evidence before the said date;

Now, therefore, in exercise of the powers conferred by sub-section (1) of section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 I hereby require you to pay the sum of Rs. (Rupees) as follows :—

In the case the said sum is not paid within the said period or in the said manner, it will be recovered as an arrear of land revenue.

Schedule

Date

Signature and Seal of the Estate Officer

FORM "F"

Notice under sub-section (3) of section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas I, the undersigned, am satisfied that you are/were in unauthorised occupation of the public premises mentioned in Schedule I below :

And, whereas, in exercise of the powers conferred on me by sub-section (2) of section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971, I consider the damages amounting to Rs. are due for the period (s) and at the rate (s) shown in Schedule II below on account of unauthorised use and occupation of the said premises;

Now, therefore under the provisions of sub-section (3) of section 7 of the Act, I hereby call upon you to show cause on or before the why an order requiring you to pay the said damages should not be made.

Schedule I

Schedule II

Date

Signature and Seal of the Estate Officer

FORM "G"

Form of order under sub-section (2) of section 7 of the Public Premises
(Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas, I, the undersigned, am satisfied that you are/were in unauthorised occupation of the public premises mentioned in Schedule below;

And whereas by a written notice dated you were called upon to show cause on or before the why an order requiring you to pay damages of Rs. for unauthorised use and occupation of the said premises should not be made;

And whereas I have considered your objections and/or the evidence produced by you;

And whereas you have not made any objections or produced any evidence before the said date :

Now, therefore, in exercise of the powers conferred on me by sub-section (2) of section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971, I hereby order you to pay the sum of Rs. assessed by me as damages on account of your unauthorised occupation of the said premises within months in equal instalments of

In the event of your refusal or failure to pay the damages or any instalment thereof within the said period or in the manner aforesaid the amount will be recovered as an arrear of land revenue..

Schedule

Date

Signature and Seal of the Estate Officer

FORM "H"

Form of Order under section 12 of the Public Premises
(Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas, there are reasons to believe that certain persons are in unauthorised occupation of the Public premises described in the Schedule hereto annexed.

Now, therefore, in exercise of the powers conferred by section 12 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 read with the notification of the Estate Officer hereby require you to furnish the information in the form specified in Schedule II hereto annexed on or before

Schedule I

Schedule II

Date

Signature and Seal of the Estate Officer or the Signature of the
officer authorised by the estate officer

Note :— Failure to comply with this order is an offence under the Indian Penal Code.

FORM "I"

Certificate under section 14 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971
from the Estate Officer to the Collector

This is to certify that the amount of Rs. is due to the Central Government from Shri resident of on account of rent/damages/costs of appeal.

In pursuance of section 14 of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971, I estate officer, request you to proceed to recover the same as an arrear of land revenue.

FORM "J"

Notice under sub-section (2) of section 13 of the Public Premises
(Eviction of Unauthorised Occupants) Act, 1971

To

Shri/Shrimati/Kumari

Whereas Shri (now deceased) was in occupation/unauthorised
occupation of the public premises described in the Schedule below;

And whereas the amount of being arrears of rent/damages
from the day of 197 , upto the day
of 197 , in respect of the said premises had become due and payable by the said Shri
..... to the Government.

And whereas you are the heir/legal representative of the deceased, Shri ;

Now, therefore, in pursuance of sub-section (2) of section 13 of the Act, I hereby call upon you to
show cause on or before the why an order requiring you to pay the
said arrears of rent/damages should not be made against you.

Schedule

Date

Signature and Seal of the Estate Officer

(No. F. 21011 (4)/71-Pol. IV)

B.L. CHAK, Jt. Secy.

144.5

No. NHIII/Misc./57/76

Dated the 8th May, 1980

To

The Secretary, Public Works Department,
(All States and Union Territories)

Subject : Reducing congestion on major roads passing through built-up areas.

I am directed to say that the "Prevention of Ribbon Development" Committee of the Indian Roads Congress had expressed general concern about growing congestion on Major roads passing through built-up areas and the absence of Parallel Service Roads. Even the new bye-passes which have been constructed get cluttered with local traffic and become congested soon after their construction. The Committee felt that there was a need for providing parallel service roads in built-up areas and the service roads should be planned and constructed as an integral part of the road construction or improvement scheme wherever such roads were passing through built-up areas. The Committee had also expressed the view that in some cases where construction of service roads was not possible due to difficulties in acquisition or permanent encroachments or other reasons, widening of existing pavements to the maximum possible extent within the available land should be considered as an alternative means to reduce congestion of traffic on account of ribbon development.

2. The Ministry of Shipping and Transport fully shares the concern expressed by the Indian Roads Congress about the growing congestion on major roads through built-up areas and feels that for ensuring the safety, convenience and comfort of highway users, a serious thought needs to be given to this problem.

3. The provision of bypasses at congested areas can mitigate the problem to a great extent and should be given adequate priority. It is, however, felt that unless adequate safeguards are built in, the bypasses themselves might soon degenerate into congested built-up areas. It is in this context that the recommendation of the Indian Roads Congress regarding the provision of parallel service roads deserves notice. So far as the National Highways are concerned, the State Governments are aware that this Ministry's policy, while constructing new bypasses, stipulates that the State Governments construct parallel service roads. It has, however, been found that the construction of parallel service roads has lagged behind resulting in severe congestion of the newly constructed bypasses. I am, therefore, to request that the construction of parallel service roads on N.H. bypasses should be accorded highest

priority by the State Government, and if need be the recommendation of the Indian Roads Congress that the parallel service roads be constructed as an integral part of the bypass scheme should be considered. I am further to request that the same principles be extended to the bye-passes on State Roads wherever they are planned.

4. As regards financing the parallel service roads this Ministry took up with the Planning Commission the question of according highest priority to construction of parallel service roads along National Highway bypasses while finalising the State Five Year Plan and Annual Plan allocations for Road Sector. It had been intimated by the Planning Commission that the State Governments did not generally propose any specific provisions for the construction of parallel service roads along National Highway bypasses in their annual plans. The State Governments were, therefore requested vide this Ministry's letter No. NHIII/Misc./57/76, datd 11th May 1977 to ensure that adequate provisions are made in their five year and yearly plans for this purpose and their representatives should stress the importance of this provision during discussions with the Planning Commission for according highest priority for incurring such expenditure in the State Road Sector Plan allocations. It is once again reiterated that urgent steps should be taken by the State Governments to earmark sufficient funds for this purpose in their annual plan.

144.6

No. NHIII/P/10/76

Dated the 19th April, 1984

To

All Secretaries of all State Govts.

(Deptts. dealing with National Highways)

Subject : Prevention of encroachments on National Highway land

I am directed to say that the problem of removal of encroachments on the National Highway land has been engaging the attention of the Government of India for some time past. The Ministry of Law, Department of Legal Affairs who were consulted in the matter have now held that the provisions in the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 (enclosed) are also applicable to such premises which have come to be vested with the Central Government under the National Highways Act.

2. It is therefore now settled that the Public Premises (Eviction of Unauthorised Occupants) Act can be applied for tackling the problem of removal of encroachments on National Highways which vest in the Government of India in terms of National Highways Act. It is accordingly, suggested that provisions contained in the Public Premises Act may be invoked to remove the encroachment on National Highways.

THE PUBLIC PREMISES (EVICTION OF UNAUTHORISED OCCUPANTS), ACT, 1971

(No. 40 OF 1971)

(As modified up to the 1st February, 1982)

Part I

(Part II-Subordinate Legislation)

(Published Separately)

(23rd August, 1971)

An Act to provide for the eviction of unauthorised occupants from public premises and for certain incidental matters

BE it enacted by Parliament in the Twenty-second Year of the Republic of India as follows :—

Premises Short
title, extent and
commencement

1. (1) This Act may be called the Public (Eviction of Unauthorised Occupants) Act, 1971.

- (2) It extends to the whole of India.

- (3) It shall be deemed to have come into force on the 16th day of September, 1958 except sections 11, 19 and 20 which shall come into force at once.

2. In this Act, unless the context otherwise requires,

- (a) * * * * *
- (b) "estate officer" means an officer appointed as such by the Central Government under section 3;
- (c) "premises" means any land or any building or part of a building and includes,
- (i) the garden, grounds and outhouses, if any, appertaining to such building or part of a building, and
 - (ii) any fitting affixed to such building or part of a building for the more beneficial enjoyment thereof;
- (d) "prescribed" means prescribed by rules made under this Act;
- (e)² "Public premises" means —
- (1) any premises belonging to, or taken on lease or requisitioned by, or on behalf of, the Central Government, and includes any such premises which have been placed by that Government, whether before or after the commencement of the Public Premises (Eviction of Unauthorised Occupants) Amendment Act, 1980. Under the control of the Secretariat of either House of Parliament for providing residential accommodation to any member of the staff of that secretariat;
 - (2) any premises belonging to, or taken on lease by, or on behalf of:
 - (i) any company as defined in section 3 of the Companies Act, 1956, in which not less than fifty-one per cent of the paid-up share capital is held by the Central Government or any company which is a subsidiary (within the meaning of that Act) of the first-mentioned company.
 - (ii) any corporation (not being a company as defined in section 3 of the Companies Act, 1956, or a local authority) established by or under a Central Act and owned or controlled by the Central Government.
 - (iii) any University established or incorporated by any Central Act.
 - (iv) any Institute incorporated by the Institute of Technology Act, 1961.
 - (v) any Board of Trustees constituted under the Major Port Trusts Act, 1963.
 - (vi) the Bhakra Management Board constituted under section 79 of the Punjab Reorganisation Act, 1966, and that Board as and when re-named as the Bhakra-Beus Management Board under sub-section (6) of section 80 of that Act; and
 - (3) relation to the Union Territory of Delhi :—
 - (i) any premises belonging to the Municipal Corporation of Delhi, or any municipal committee or modified area committee, and
 - (ii) any premises belonging to the Delhi Development Authority, whether such premises are in the possession of, or leased out by, the said authority;
 - (f) "rent", in relation to any public premises, means the consideration payable, periodically for the authorised occupation of the premises, and includes :—
 - (i) any charge for electricity, water or any other services in connection with the occupation of the premises.
 - (ii) any tax (by whatever name called) payable in respect of the premises, where such charge or tax is payable by the Central Government or the corporate authority;

(fa)³ Statutory authority, in relation to the public premises referred to in clause (e) of this section, means :—

1 Clause (1) omitted by Act 61 of 1980, Section 2,

2 Substituted by section 3, *ibid*, for clause (e).

3 Inserted by Act 61 of 1980, section 2,

- (i) in respect of the public premises placed under the control of the Secretariat of either House of Parliament, the Secretariat of the concerned House of Parliament.
- (ii) in respect of the public premises referred to in item (i); of sub-section (2) of that clause, the company or the subsidiary company, as the case may be referred to therein
- (iii) in respect of the public premises referred to in item (ii) of sub-clause (2) of that clause, the corporation referred to therein.
- (iv) in respect of the public premises referred to, respectively, in items (iii), (iv), (v) and (vi) of sub-clause (2) of that clause, the University, Institute or Board, as the case may be, referred to therein, and
- (v) in respect of the public premises referred to in sub-clause (3) of that clause, the corporation, committee or Authority, as the case may be, referred to in that sub-clause;
- (g) "unauthorised occupation" in relation to any public premises, means the occupation by any person of the public premises without authority for such occupation, and includes the continuance in occupation by any person of the public premises after the authority (whether by way of grant or any other mode of transfer) under which he was allowed to occupy the premises has expired or has been determined for any reason whatsoever.

Appointment of
estate officers

3. The Central Government may, by notification in the Official Gazette.

- (a) appoint such persons, being gazetted officers of Government or officers of equivalent rank of the¹ (Stationary authority), as it thinks fit to be estate officers for the purposes of this Act : ²

³ (Provided that no officer of the Secretariat of the Rajya Sabha shall be so appointed except after consultation with the Chairman of the Rajya Sabha and no officer of the Secretariat of the Lok Sabha shall be so appointed except after consultation with the Speaker of the Lok Sabha :

Provided further that an officer of a statutory authority shall only be appointed as an estate officer in respect of the public premises controlled by that authority; and

- (b) define the local limits within which, or the categories of public premises in respect of which, the estate officers shall exercise the powers conferred, and perform the duties imposed, on estate officers by or under the Act.

Issue of notice to
show cause against
order of eviction

4. (1) If the estate officer is of opinion that any persons are in unauthorised occupation of any public premises and that they should be evicted, the estate officer shall issue in the manner hereinafter provided a notice in writing calling upon all persons concerned to show cause why an order of eviction should not be made.

(2) The notice shall :—

- (a) specify the grounds on which the order of eviction is proposed to be made; and
- (b)⁴ require all persons concerned, that is to say, all persons who are, or may be, in occupation of, or claim interest in, the public premises.
 - (i) to show cause, if any, against the proposed order on or before such date as is specified in the notice, being a date not earlier than seven days from the date of issue thereof, and
 - (ii) to appear before the estate officer on the date specified in the notice along with the evidence which they intend to produce in support of the cause shown, and also for personal hearing, if such hearing is desired.

(3) The estate officer shall cause the notice to be served by having it affixed on the outer door or some other conspicuous part of the public premises, and in such other manner as may be prescribed, whereupon the notice shall be deemed to have been duly given to all persons concerned.

(4) Where the estate officer knows or has reasons to believe that any persons are in occupation of the public premises, then, without prejudice

¹ Substituted by section 2, *ibid.*, for "corporate authority".

² The word "and" omitted by section 3, *ibid.*

³ Added by Act 61 of 1980, section 3

⁴ Substituted by section 4, *ibid.* for clause (h).

to the provisions of sub-section (3), he shall cause a copy of the notice to be served on every such persons by post or by delivering or tendering it to that person or in such other manner as may be prescribed.

Eviction of unauthorised occupants

5. (1) If, after considering the cause, if any, shown by any person in pursuance of a notice under section 4 and 1 (any evidence produced by him in support of the same and after personal hearing, if any, given under clause (b) of sub-section (2) of section (4), the estate officer is satisfied that the public premises are in unauthorised occupation, the estate officer may make an order of eviction, for reasons to be recorded therein, directing that the public premises shall be vacated, on such date as may be specified in the order, by all persons who may be in occupation thereof or any part thereof, and cause a copy of the order to be affixed on the outer door or some other conspicuous part of the public premises.
- (2) If any person refuses or fails to comply with the order of eviction¹ (on or before the date specified in the said order or within fifteen days of the date of its publication under sub-section (i), whichever is later) the estate officer or any other officer duly authorised by the estate officer in his behalf² (may, after the date so specified or after the expiry of the period aforesaid, whichever, is later evict that person) from, and take possession of, the public premises and may, for that purpose, use such force as may be necessary.

Power to remove unauthorised constructions, etc.

3. (5 A) (1) No person shall

- (a) erect or place or raise any building or other structure or fixture,
- (b) display or spread any goods,
- (c) bring or keep any cattle or other animal.

on, or against, or in front of, any public premises except in accordance with the authority (whether by way of grant or any other mode of transfer) under which he was allowed to occupy such premises.

- (2) Where any building or other structure or fixture has been erected or any goods have been displayed or spread or any cattle or other animal has been brought on, any public premises in contravention of the provisions of sub-section (1), the estate officer may serve upon the person erecting such building or other structure or fixture or displaying or spreading such goods or bringing such cattle or other animal on the public premises, a notice requiring him either to remove, or to show cause why he shall not remove, such building, other structure or fixture, or, as the case may be, such goods or cattle or other animal from the public premises within such period, not being less than seven days, as he may specify in the notice; and on the omission or refusal of such person either to show cause, or to remove such building or other structure or fixture, or, as the case may be, such goods or cattle or other animal from the public premises, or, where the cause shown is not in the opinion of the estate officer, sufficient, the estate officer may remove the building or other structure, or, as the case may be, such goods or cattle or other animal from the public premises and recover the cost of such removal from the person aforesaid as an arrear of land revenue.

Order of demolition of unauthorised construction

- 5B. (1) Where the erection of any building or execution of any work has been commenced, or is being carried on or has been completed, on any public premises by any person in occupation of such public premises under an authority (whether by way of grant or any other mode of transfer), and such erection of building or execution of work is in contravention of, or not authorised by, such authority, then, the estate

¹ Substituted by section 5, *ibid*, for certain words.

² Substituted by Act 61 of 1980, section 5, for certain words.

officer may, in addition to any other action that may be taken under this Act or in accordance with the terms of the authority aforesaid make an order, for reasons to be recorded therein, directing that such erection or work shall be demolished by the person at whose instance the erection or such period, as may be specified in the order, not being less than seven days, or work has been commenced, or is being carried on, or has been completed, within more than fifteen days, from the date of publication of the order under sub-section (3):

Provided that no order under this sub-section shall be made unless the person concerned has been given, by means of a notice served in the prescribed manner, a reasonable opportunity of showing cause why such order should not be made

- (2) Where the erection or work has not been completed, the estate officer may, by the same order, or by a separate order, whether made at the time of the issue of the notice under the provision to sub-section (1) or at any other time, direct the person at whose instance the erection or work has been commenced, or is being carried on, to stop the erection or work until the expiry of the period within which an appeal against the order of demolition, if made may be preferred under section 9.
- (3) The estate officer shall cause every order made under sub-section (1), or as the same may be, under sub-section (2), to be affixed on the outer door or some other conspicuous part, of the public premises.
- (4) Where no appeal has been preferred against the order of demolition made by the estate officer under sub-section (1) or where an order of demolition made by the estate officer under that sub-section has been confirmed on appeal, whether with or without variation, the person against whom the order has been made shall comply with the order within the period specified therein, or, as the case may be, within the period, if any, fixed by the appellate officer on appeal, and, on the failure of the person to comply with the order within such period, the estate officer or any other officer duly authorised by the estate officer in this behalf, may cause the erection or work to which the order relates to be demolished.
- (5) Where an erection or work has been demolished, the estate officer may, by order, require the person concerned to pay the expenses of such demolition within such time, and in such number of instalments, as may be specified in the order.)

Disposal of property left
on public premises by
unauthorised occupants

6. (1) Where any persons have been evicted from any public premises under section 5, ¹(or where any building or other work has been demolished under section 5B) the estate officer may, after giving fourteen days' notice to the persons from whom possession of the public premises has been taken and after publishing the notice in at least one newspaper having circulation in the locality, remove or cause to be removed or dispose of by public auction any property remaining on such premises.

- ²(1A) Where any goods, materials, cattle or other animal have been removed from any public premises under section 5A, the estate officer may, after giving fourteen days' notice to the persons owning such goods, materials, cattle or other animal and after publishing the notice in at least one newspaper having circulation in the locality, dispose of, by public auction, such goods, materials, cattle or other animal.

- (1B) Notwithstanding anything contained in sub-sections (1) and (1A), the

¹ Inserted by Act 61 of 1980, section 7.

² Inserted by Act 61 of 1980, section 7.

giving or publication of any notice referred to therein shall not be necessary in respect of any property which is subject to speedy and natural decay, and the estate officer may, after recording such evidence as he may think fit, cause such property to be sold or otherwise disposed of in such manner as he may think fit.

- (2) Where any property is sold under sub-section (1), the sale proceeds thereof shall, after deducting the expenses of the sale and the amount, if any, due to the Central Government or the ¹(statutory authority) on account of arrears of rent or damages or costs, be paid to such person or persons as may appear to the estate officer to be entitled to the same :

Provided that where the estate officer is unable to decide as to the person or persons to whom the balance of the amount is payable or as to the apportionment of the same, he may refer such dispute to the civil court of competent jurisdiction and the decision of the court thereon shall be final.

Power to require payment of rent or damages in respect of public premises

7. (2A) The expression "costs", referred to in sub-section (2), shall include the cost of removable recoverable under section 5A and the cost of demolition recoverable under section 5B]
7. (1) Where any person is in arrears of rent payable in respect of any public premises, the estate officer may, by order, require that person to pay the same within such time and in such instalments as may be specified in the order.

(2) Where any person is, or has at any time been, in unauthorised occupation of any public premises, the estate officer may, having regard to such principles of assessment of damages as may be prescribed, assess the damages on account of the use and occupation of such premises and may, by order, require that person to pay the damages within such time and in such instalments as may be specified in the order.

- ²(2A) While making an order under sub-section (1) or sub-section (2), the estate officer may direct that the arrears of rent or, as the case may be, damages shall be payable together with simple interest at such rate as may be prescribed, not being a rate exceeding the current rate of interest within the meaning of the Interest Act, 1978.)

- (3) No order under sub-section (1) or sub-section (2) shall be made against any person until after the issue of a notice in writing to the person calling upon him to show cause within such time as may be specified in the notice, why such order should not be made, and until his objections, if any, and any evidence he may produce in support of the same, have been considered by the estate officer.

Power of estate officers
5 of 1908

8. An estate officer shall, for the purpose of holding any inquiry under this Act, have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908, when trying a suit in respect of the following matters, namely :—
- summoning and enforcing the attendance of any person and examining him on oath;
 - requiring the discovery and production of documents;
 - any other matter which may be prescribed.

Appeals

9. (1) An appeal shall lie from every order of the estate officer made in respect of any public premises under ³(section 5 or section 5B) or section 7 to an appellate officer who shall be the district judge of the district in which the public premises are situated or such other judicial

¹ Substituted by section 2, *ibid*, for "corporate authority".

² Inserted by section 8, *ibid*.

³ Substituted by Act 61 of 1980, section 9, for "section 5"

officer in that district of not less than ten years' standing as the district judge may designate in this behalf

(2) An appeal under sub-section (1) shall be preferred, —

- (a) in the case of an appeal from an order under section 5, ¹ (within twelve days) from the date of publication of the order under sub-section (1) of that section; and
- (b) in the case of an appeal from an order ² (under 5B or section 7, within twelve days) from the date on which the order is communicated to the appellant;

Provided that the appellate officer may entertain the appeal after the expiry of the ² (said period), if he is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

(3) Where an appeal is preferred from an order of the estate officer may stay the enforcement of that order for such period and on such conditions as he deems fit :

3(Provided that where the construction or erection of any building or other structure or fixture or execution of any other work was not completed on the day on which an order was made under section 5B for the demolition or removal of such building or other structure or fixture, the appellate officer shall not make any order for the stay of enforcement of such order, unless such security, as may be sufficient in the opinion of the appellate officer, has been given by the appellant for not proceeding with such construction, erection or work pending the disposal of the appeal).

(4) Every appeal under this section shall be disposed of by the appellate officer as expeditiously as possible.

(5) The costs of any appeal under this section shall be in the discretion of the appellate officer.

(6) For the purpose of this section, a presidency town shall be deemed to be a district and the chief judge or the principal judge of the city civil court therein shall be deemed to be the district judge of the district.

Finality of orders

10. Save as otherwise expressly provided in this Act, every order made by an estate officer or appellate officer under this Act shall be final and shall not be called in question in any original suit, application or execution proceeding and no injunction shall be granted by any court or other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.

Offences and penalty

11. (1) If any person who has been evicted from any public premises under this Act again occupies the premises without authority for such occupation, he shall be punishable with imprisonment for a term which may extend to one year, or with fine which may extend to one thousand rupees, or with both.
- (2) Any magistrate convicting a person under sub-section (1) may make an order for evicting that person summarily and he shall be liable to such eviction without prejudice to any other action that may be taken against him under this Act.
12. If the estate officer has reason to believe that any persons are in unauthorised occupation of any public premises, the estate officer or any other officer authorised by him in this behalf may require those persons or any other person to furnish information relating to the names and other

1 Substituted by section 9, *ibid*, for "within fifteen days".

2 Substituted by section 9, *ibid*, for certain words.

3 Added by section 9, *ibid*.

particulars of the persons in occupation of the public premises and every person so required shall be bound to furnish the information in his possession.

13. (1) Where any person against whom any proceeding for the determination of arrears or rent or for the assessment of damages³ (or for the determination of the amount payable by way of interest on such arrears of rent or damages) is to be taken or during the pendency thereof, the proceeding has been taken dies before the proceeding may be taken or, as the case may be, continued against the heirs or legal representatives of that person.

¹(1A) Where any person from whom any cost of removal of any building or other structure or fixture, or, as the case may be, any goods, cattle or other animal is to be recovered under sub-section (2) of section 5A, or any expenses of demolition are to be recovered under sub-section (5) of section 5B, dies before any proceeding is taken for the recovery of such cost or during the pendency thereof, the proceeding may be taken or, as the case may be, continued against the heirs or legal representatives of that person.

- (2) Any amount due to the Central Government or the ² (statutory authority) from any person whether by way of arrears of ³ (rent or damages or costs of removal referred to in section 5A or expenses of demolition referred to in section 5B or interest referred to in sub-section (2A) of section 7 or any other cost) shall, after the death of the person, be payable by his heirs or legal representatives but their liability shall be limited to the extent of the assets of the deceased in their hands.

Recovery of rent, etc.,
as an arrear of land
revenue

14. If any person refuses or fails to pay ⁴(the expenses of demolition payable under sub-section (5) of section 5 B or) the arrears of rent payable under sub-section (1) of section 7 or the damages payable under sub-section (2) 2 (or the interest determined under sub-section (2A) of that section or the costs awarded to the Central Government or the ⁵(statutory authority) under sub-section (5) of section 9 or any ⁵ (portion of such rent, damages, expenses, interest) or costs within the time, if any, specified therefor in the order relating thereto, the estate officer may issue a certificate for the amount due to the Collector who shall proceed to recover the same as an arrear of land revenue.

Bar of
jurisdiction

⁶(15. No court shall have jurisdiction to entertain any suit or proceeding in respect of

- (a) the eviction of any person who is in unauthorised occupation of any public premises, or
- (b) the removal of any building, structure or fixture or goods, cattle or other animal from any public premises under section 5A, or
- (c) the demolition of any building or other structure made, or ordered to be made, under section 5B, or
- (d) the arrears of rent payable under sub-section (1) of section 7 or damages payable under sub-section (2), or interest payable under sub-section (2A), of that section, or
- (e) the recovery of:—
 - (i) costs of removal of any building, structure or fixture or goods, cattle or other animal under section 5A, or
 - (ii) expenses of demolition under section 5B, or

1 Inserted by Act 61 of 1980, section 10.

2 Substituted by section 2, *ibid.*, for "corporate authority".

3 Substituted by section 10, *ibid.*, for "rent or damages or costs"

4 Inserted by section 11, *ibid.*

5 Substituted by section 11, *ibid.*, for "portion of such rent, damages."

6 Substituted by section 12, *ibid.*, for section 15.

		(iii) costs awarded to the Central Government or statutory authority under sub-section (5) of section 9, or
		(iv) any portion of such rent, damages, costs of removal, expenses of demolition or costs awarded to the Central Government or the statutory authority.
Protection of action taken in good faith	16.	No suit, prosecution or other legal proceeding shall lie against the Central Government or the ¹ statutory authority appellate officer or the estate officer in respect of anything which is in good faith done or to be done in pursuance of this Act or of any rules or orders made thereunder.
Delegation of powers	17.	The Central Government may, by notification in the official Gazette, direct that any power exercisable by it under this Act shall, subject to such conditions, if any, as may be specified in the notification, be exercisable also by a State Government or an officer of the State Government.
Power to make rules	18.	(1) The Central Government may, by notification in the official Gazette, make rules for carrying out the purpose of this Act. (2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely :— (a) the form of any notice required or authorised to be given under this Act and the manner in which it may be served : (b) the holding of inquiries under this Act (c) the distribution and allocation of work to estate officers and the transfer of any proceeding pending before an estate officer to another estate officer: (d) the procedure to be followed in taking possession of public premises: (e) the manner in which damages for unauthorised occupation may be assessed and the principles which may be taken into account in assessing such damages. ²(ea) the rate at which interest shall be payable on arrears of rent specified in any order made under sub-section (1) of section 7, or damages assessed under sub-section (2) of that section: (f) the manner in which appeals may be preferred and the procedure to be followed in appeals: (g) any other matter which has to be or may be prescribed. (3) Every rule made under this section shall be laid, as soon as may be after it is made, before each House of Parliament while it is in session for a total period of thirty days which may be comprised in one session or ³(in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid.) both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be: so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.
Repeal	19.	The Public Premises (Eviction of Unauthorised Occupant) Act, 1958 is hereby repealed.
32 of 1958		
32 of 1958	20.	Notwithstanding any judgement, decree or order of any court, anything done or any action taken ⁴ (including rules of orders made, notices issued, evictions ordered or effected, damages assessed, rents or damages or costs recovered and proceedings initiated) or purported to have been done or taken under the Public Premises (Eviction of Unauthorised Occupations) Act, 1958 (hereafter in this section referred to as the 1958-Act) shall be

¹ Substituted by Act 61 of 1980, section 2, for "corporate authority".

² Inserted by section 13, *ibid* for certain words

³ Inserted by section 13, *ibid*.

⁴ Substituted by section 13, *ibid*, for certain words.

deemed to be as valid and effective as if such thing or action was done or taken under the corresponding provisions of this Act which, under sub-section (3) of section 1 shall be deemed to have come into force on the 16th day of September, 1958, and accordingly :—

- (a) no suit or other legal proceeding shall be maintained or continued in any court for the refund of any rent or damages or costs recovered under the 1958-Act where such refund has been claimed merely on the ground that the said Act has been declared to be unconstitutional and void; and
- (b) no court shall enforce a decree or order directing the refund of any rent or damages or costs recovered under the 1958-Act merely on the ground that the said Act has been declared to be unconstitutional and void.

**THE PUBLIC PREMISES (EVICTION OF UNAUTHORISED
OCCUPANTS) ACT, 1971**

(40 of 1971)

(As modified up-to-the 1st February, 1982)

ERRATA

Page I

In part II, for "Legislatian" read "Legislation".

In section (2) (e), for "³(e)", read "²(e)".

In footnote 2, for "section 3", read "section 2".

Page 4

In section 5B (1), for "such period, as may be specified in the order, not being less than seven days or work has been commenced, or is being carried on, or has been completed, within", read "work has been commenced, or is being carried on, or has been completed, within such period, as may be specified in the order, not being less than seven days, or".

In section 5B (2), in lines 6-7, for "prerferred" read "preferred".

Page 5

In section 7 (2AO, in line 2, for "a-rears" read "arrears".

144.7

No. RW/NHIII/COORD/36/84

Dated the 17th May, 1984

To

The Secretaries of all States/Union Territories
(Department dealing with National Highways)

Subject : Recommendations of the Vohra Committee — Protection of National Highway land against encroachment

I am directed to say that the Committee on the Agency System for National Highways had, *inter-alia*, recommended as under :

"All National Highways land should be completely cleared of encroachments and fenced off as a protection against further encroachments. These lands should then after be properly landscaped by bringing in earth from elsewhere and planted with variety of trees and shrubs selected for their economic, visual and environmental qualities."

2. The Government of India have since accepted this recommendation. It may be mentioned that the National Highway road lands are being encroached upon on wide scale. Apart from this, such lands are often disfigured by the State PWDs themselves by being dug up for the earth required to raise road levels thus creating ugly and insanitary 'Borrow' pits along National Highways. The committee observed that it is only in places where road lands are free from encroachments and misuse and where trees have been planted that they provide an attractive back-drop of greenery to the highway which makes motoring a pleasure and reduce the strain of travel.

3. Attention is also invited to this Ministry's letter No. NHIII/P/72/76 dated the 13th January, 1977 containing guidelines to control the ribbon development and removal of encroachments (copy enclosed for ready reference). Attention is also invited to this Ministry's letter No. NHIII/P/10/76 dated the 19th April, 1984, containing the views of the Union Law Ministry regarding application of the provisions of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 for the removal of encroachments. According to them, the provisions of the Public Premises Act, 1971 can be applied for tackling the problem of removal of encroachments on National Highways which vest in the Government of India in terms of National Highways Act. I am accordingly to request that suitable action may kindly be taken to protect the National Highway land against encroachments in the light of these instructions. Action taken or proposed to be taken may also be intimated to this Ministry.

144.9

No. NHIII/P/10/76

Dated the 4th June 1984

To

The Secretaries of all State Governments
(Departments dealing with National Highways)

Subject : Prevention of encroachments of NH land

In continuation of this Ministry's letter of even number dated the 19th April, 1984, I am directed to forward herewith a copy of the Public Premises (Eviction of Unauthorised Occupants) Act, 1971 for reference and record. As indicated in the letter referred to, provisions of the enclosed Act may kindly be applied for tackling the problem of Encroachments on National Highways. It is suggested that this may be brought to the notice of all concerned in the State PWD.

145. UTILITY SERVICES AND CANAL CROSSINGS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
145.1	NHII/41 (58), 68 dt. 31.1.69	Licence for use of NHs for Laying Water Supply Pipe Lines	145/1
145.2 500	NHIII/P/9/76 dt. 7.2.76	Construction of Culverts across NHs to Facilitate Crossing of Irrigation Minors and Water Courses	145/2
145.3	NHIII/P/66/76 dt. 19.11.76	Laying and Protection of Coaxial and Trunk Telephone Cables belonging to P&T Department on NHs	145/3
145.4	NHIII/P/66/76 dt. 19.11.76	Accommodation of Under-ground Utility Services	145/5
145.5	NHIII/P/66/76 dt. 26.3.82	Laying and Protection of Coaxial and Trunk Telephone Cables	145/8
145.6	NHIII/P/20/77 dt. 8.4.82	Accommodation of Overhead Electric Power lines on NH Land	145/8
145.7	RW/NHIII/P/66/76 dt. 11.5.82	Accommodation of Under-ground Utility Services like Electric Cables and Pipelines for Water/Gas/ Petroleum Products along and Across NHs	145/9
145.8	RW/NHIII/P/66/76 dt. 20.8.82	Laying and Protection of Coaxial and Trunk Telephone Cables belonging to P&T Department on NHs	145/10
145.9	RW/NHIII/P/32/84 dt. 13.11.84	Advance action for Location and Shifting of Utility Services in respect of NH Works	145/10

No. NHI-41 (58)/68

Dated the 31st Jan., 1969

To

All State Governments except Tripura, Andaman and Nicobar Islands
(Departments dealing with National Highways)

Subject : Licence for use of National Highways for laying water supply pipelines

I am directed to invite a reference to this Ministry's letter No. NHI-41 (58)/68, dated the 24th December, 1968, forwarding a form of the licence deed to be executed for laying of water supply pipe lines to National Highway land, and to say that the period of validity of the agreement as shown in Clause 4 (XI) has been wrongly typed as two years. This may be corrected to read as five years.

Note : Corrected form of the licence deed enclosed

LICENCE DEED FOR LAYING OF WATER SUPPLY PIPES ON NATIONAL HIGHWAY LAND

Agreement to lay water supply pipes at/from _____ Kilometre/kilometre _____
to kilometres on/along National Highway No. _____ in Survey No. _____ of
the village of _____ Taluks _____ of the _____ district

AN AGREEMENT made this _____ day of _____ (month) of _____ year
(to be written in words) _____ between the President of India (hereinafter called the 'Government which expression shall, unless
excluded by or repugnant to the context, include his successors in office and assigns) of the one part and _____
(name of the party)-(hereinafter called 'The Licensee' which expression shall, unless excluded by or repugnant to the context, include
his heirs its successors/their successors and assigns) of the other Part.

WHEREAS the licensee has/licensees have applied to the Government for permission to lay water supply pipes at/from
Kilometre/Kilometre _____ to kilometre _____ on/along National Highway No: _____
In Survey No. _____ of the Village of _____ Taluka _____ of the District _____

3. AND WHEREAS the Government have agreed to grant such permission on the terms and conditions hereinafter mentioned;
4. Now this Agreement witnesseth that, in consideration of the conditions hereinafter contained and on the part of the Licensee/
Licensees to be observed and performed, the Government hereby grants to the licensee/licensees permission to lay water supply
pipes as per the approved drawing attached hereto subject to the following conditions, namely :—
 - (i) That the licensee/licensees shall within three months from the date here of but without interfering with the road traffic
complete the laying of water supply pipes to the satisfaction of the Divisional Engineer 'Incharge of the National
Highways (hereinafter referred to as the Divisional/Executive Engineer) in accordance with the drawings and
specifications approved by the Divisional/Executive Engineer.
 - (ii) That the licensee/licensees shall be responsible for restoring the road and at his/their own cost to its original condition
after laying the water supply pipes or, after any damage caused due to inadequate maintenance/operation of the water
supply pipes.
 - (iii) That in case of any burst or leak of water supply pipes, the Licensee/licensees shall bear the entire cost of restoration of
damage caused to the road.
 - (iv) That the licensee/licensees shall not without the prior permission in writing of the Divisional/Executive Engineer under-
take any work of shifting, repairs or alterations to the said water supply pipes.
 - (v) That the Licensee/licensees shall at all times permit any duly authorised officer or servant of the Government to inspect
the said water supply pipes.
 - (vi) That the licensee/licensees shall be liable for any loss or damage caused to the Government by drainage obstruction or
any other like cause due to the said water supply pipes.
 - (vii) That the licensee/licensees within two months of a notice duly given to him to this behalf by the Divisional/Executive
Engineer shall at his/their own cost remove the water supply pipes and restore the road land to its original condition
when required to do so by the Government or by any person authorised on its behalf. The licensee/licensees shall not be
entitled to any compensation on account of such removal or restoration.
 - (viii) That if the licensee fails/licensees fail to execute any work which he has/they have agreed to execute under this agree-
ment to the entire satisfaction of the Divisional/Executive Engineer, the work shall be executed by the Divisional/
Executive Engineer at the cost of the Licensee/licensees and the amount shall be recoverable from the
Licensee/licensees as arrears of land revenue without prejudice to any other remedies which may be open to the Govern-
ment in this behalf.
 - (ix) That the licensee/licensees shall not sell, transfer or otherwise dispose of the premises without obtaining the previous
consent of the Government in writing.
 - (x) That no fee will be charged for the licensee.

- (xi) That this agreement will remain in force for a period of five years from the date of execution in the first instance and be terminated by a notice of two months and the permission may not be renewed after the expiry of the said period.
 - (xii) That the permission granted by this licence shall not in any way to be deemed to convey to the licensee/licensees any right to or over or any interest in Government land other than what is herein expressly granted.
 - (xiii) That during the subsistence of this licence, the water supply pipes located on the road shall be deemed to have been constructed and continued only by the consent and permission of the Government so that the right of the licensee/licensees to the use thereof shall not become absolute and indefeasible by lapse of time.
 - (xiv) That the licensee/licensees shall bear the stamp duty charges on this agreement.
5. The water supply pipes shall not be brought into use by the licensee/licensees unless a completion certificate to the effect that the water supply pipes have been laid in accordance with the approved specifications and drawings has been obtained from the Divisional/Executive Engineer.
 6. Notwithstanding anything contained in clause 4 (vii), the licence may be cancelled at any time by the Government for a breach of any condition of the licence and the licensee/licensees shall not be entitled to any compensation for any loss caused to it by such cancellation, nor shall it be absolved from any liability already incurred under this agreement.

IN WITNESS WHEREOF Shri _____ the Director General (Road Development) and Additional Secretary, Ministry of Transport and Shipping (Roads Wing) for and on behalf of the President of India and the licensee has/ licensees have signed and subscribed their respective hands hereinto the day, month and year first above written.

Signed by Shri (Name in full) the licensee
the constituted attorney of the licensees

Signed by Shri (Name in full) for and on
behalf of the President of India

In the presence of

- | | |
|--|--|
| 1. Name in full (Signature) with designation | 1. Name in full (Signature) with designation |
| 2. Name in full (Signature) with designation | 2. Name in full (Signature) with designation |

N.B. Wherever alternatives such as "at"/from, his/their, licensee/licensees, Divisional/Executive, has/have etc. are given, only applicable portions should be typed in the fair licence deed.

145.2
500

No. NHIII/P/9/76

Dated the 7th Feb., 1976

To

All State Governments and Union Territories
(Deptt., dealing with National Highways)

Subject : Construction of culverts across National Highways to facilitate crossing of Irrigation minors and water courses

This Ministry has been receiving requests from the States for permission to construct culverts across National Highways to facilitate the crossing of irrigation minors and water courses. The matter has been reviewed and it has been decided to authorise the Chief Engineers of the States to accord permission in such cases themselves provided the water surface width of such channels at full supply level does not exceed 2.5 metres and instructions contained in the Annexure are fulfilled. For all other cases, prior approval of this Ministry should be obtained.

2. As it is essential to ensure that the conditions laid down are strictly adhered to, the works connected with the crossing of irrigation minors and water courses including reconstruction of the National Highways involved, if any, should be executed by the Highway Authority as deposit works.
3. It is requested that the contents of this circular may be brought to the notice of all officers in your Department engaged on National Highway works.

Encls : As below.

ANNEXURE

INSTRUCTIONS REGARDING CONSTRUCTION OF CULVERTS ACROSS NATIONAL HIGHWAYS TO FACILITATE CROSSING OF IRRIGATION MINORS AND WATER COURSES WHEN THE WATER SURFACE WIDTH OF SUCH CHANNELS AT FULL SUPPLY LEVEL DOES NOT EXCEED 2.5 METRES :

- (i) The culverts shall be designed for National Highway Standards and should conform to the requirements of Indian Roads Congress Special Publication No. 13 "Guidelines for the Design of Small Bridges and Culverts". In the case of pipe culverts, the pipes should be of NP 3 type described in IS : 458.
- (ii) Where the canal is to cross the National Highway under pressure, R.C.C. box culvert of appropriate design conforming to National Highway Standards should be used.

- (iii) Deck level of the culvert shall be so fixed that it does not adversely disturb the existing longitudinal and cross profiles of the highway by causing a hump.
- (iv) In fixing the width of the culvert across the highway, due consideration should be given to possible widening of the highway in the immediate future. In case of single and two lane highways, it shall not be less than 12 metres.
- (v) Individual items of the culvert shall be executed fully in accordance with the Ministry's "Specification for Roads and Bridge Works".
- (vi) Such culverts shall be constructed by the Highway Authority only as deposit work. Before commencing work, prior approval of the State Chief Engineer shall be obtained in writing in every case. A copy of each approval along with necessary drawing showing details and location of the structure shall be endorsed to Roads Wing and its regional office for information and record.
- (vii) In no case shall irrigation courses be allowed to flow through existing cross drainage structures.

145.3

No. NHIII/P/66/76

Dated the 19th Nov., 1976

To

All State Governments and Union Territories
(Deptt. dealing with National Highways)

Subject : Laying and protection of coaxial and trunk telephone cables belonging to the Posts and Telegraphs Department on National Highways

From time to time the Ministry has issued instructions regarding laying of coaxial and trunk telephone cables along National Highways by the Posts and Telegraphs Departments. In supersession of all previous letters on this subject given below, I am directed to convey the following instructions in this respect for future guidance.

No. WI-43 (11)/64, dated the 30th June, 1965

No. WI-43 (10)/64, dated the 4th September, 1968

No. NHIII/Misc./181/73, dated the 8th January, 1974.

2. *Laying of Telephone Cables*

2.1 The coaxial and trunk telephone cables should ordinarily run along the road land boundary or at a minimum distance of 15 metres from the centreline of the nearest carriageway where the road land is wider. In special cases, where it may be necessary to avoid borrowpits or low lying areas, the cables could be allowed underneath the shoulders at a distance of 0.6 metre from the outer edge of the road embankment, provided the same were located atleast 4.5 metres away from the centre-line of the nearest carriageway and 1.2 metre below the road surface.

2.2 The following methods should be adopted for laying the cables on culverts and bridges :

- (i) The cables should be carried in a pipe of suitable size, or through a duct if existing.
- (ii) On arch type structures where cushion on top of the arch is 0.5 metre or more, the pipe carrying the cable may be buried on the top of the arch adjoining the parapet wall by digging close to the wheelguards. Where the thickness of the cushion is less than 0.5 metre, the pipe carrying the cable may be buried under the wheelguard masonry and the wheelguard rebuilt. In carrying out these operations, every precaution should be taken to see that no damage occurs to the arch of the structure.
- (iii) If neither of the methods mentioned above is possible, the carrier pipe should be clamped to the outside of the parapet wall of the culverts/bridges. If necessary, the pipe may be taken through the parapet wall at the ends where the wall diverges away from the road.
- (iv) If the method mentioned in para (iii) is also not possible, then the carrier pipe can be fixed on top of the road kerb close to the inside face of the parapet, by means of clamps using Raval plugs and wood screws of small diameter bolts, without damaging the concrete, and limiting the external diameter of the pipe to 7.5 mm. This should be done with the specific permission of the State Chief Engineer, and under the close supervision of the Road officials.
- (v) For all major bridges of 60 metre or more in length to be constructed in future on National Highways, the Posts and Telegraphs Department should be consulted for ascertaining their requirements in the form of ducts etc. to be provided on these bridges.

2.3. Repeater stations, if any, should not be less than 15 metre from the centre-line of the nearest carriageway and so located as not to obstruct vision of the motorists. Such stations may be enclosed by a fence placed at a distance of 3 metre or less around the station cabin, subject to

the condition that no part of the fence is within 6 metre of the centre-line of the nearest carriageway.

3. *Conditions for According Approval*

3.1. Provided the conditions mentioned in paras 2.1 to 2.3 are fulfilled, the State Government may authorise the State Chief Engineer to grant permission for laying of the cables under intimation to this Ministry. Each case of permission should, however, be subject to the Posts and Telegraphs Authorities agreeing to the following obligations :

- (i) The Posts and Telegraphs Authorities will notify the concerned Executive Engineer at least 15 days in advance before digging trenches alongside the road.
- (ii) Adequate arrangements for cautioning the traffic by way of caution boards during day time and danger lights at night will be provided by the Posts and Telegraphs Department.
- (iii) Each day the extent of digging trenches should be strictly regulated so that cables are laid and trenches filled up before the close of the work that day. The filling should be completed to the satisfaction of the Executive Engineer in charge.
- (iv) Posts and Telegraphs Department shall indemnify the Road Authority from all the damages, if any, due to the digging of trenches for the laying of the cables.
- (v) If the Road Authority considers the shifting of the cables, repeater stations fences etc. necessary for public purposes, the Posts and Telegraphs Department will carry out the required shifting at their own cost within a reasonable time (not exceeding 90 days) of the intimation given to them by the Road Authority.

4. *Protection of telephone cables during maintenance/reconstruction of the road*

4.1. While carrying out improvements to National Highways specially where widening/reconstruction of existing minor bridges and culverts or improvement of geometrics is involved, damage might inadvertently be caused to the cables already laid in position. It is, therefore, necessary that all improvement works on roads be so planned and executed that there is little change of damage to cables to the Posts and Telegraphs Department. The following precautions should be taken to ensure this :—

- (i) Before taking up any improvement work of the roadway/cross-drainage structure, it should be verified in advance if any cable of the Posts and Telegraphs Department exists at the particular location. It is understood that route maps indicating location of the cables are being periodically supplied by the field units of the Posts and Telegraphs Department to the State Public Works Department Executive Engineers/Deputy Engineers concerned. Where this is not so, the Executive Engineer of the Public Works Department should consult his counterpart in the Posts and Telegraphs Department. A list of Posts and Telegraphs Officers to be contacted is enclosed, for information, see Annexure 2.
- (ii) In situations where Posts and Telegraphs cables are involved, the Executive Engineer Public Works Department should get in touch with his counterpart in the Posts and Telegraphs Department and draw up an agreed programme for the execution of works so that the latter could make suitable arrangements for guarding the cables. The Posts and Telegraphs units would be expected to inspect, guide and to ensure that the time table set by the Public Works Department authorities for the completion of works is in no way upset.
- (iii) At locations where the cables have to be relaid, the Posts and Telegraphs Department will do the required shifting vide para 3.1 (iv) and (v) above.
- (iv) Where the Public Works Department gives permission to other departments like Irrigation, Electricity or Railways to dig a stretch of the National Highways having Posts and Telegraphs cables, timely intimation of this must be given to the concerned Posts and Telegraphs officers so that they could depute their staff to guard the cable while the works are being carried out.

5. It is requested that these instructions may be carefully followed in future and circulated among all officers in your department concerned with National Highways works.

ANNEXURE 2

LIST OF P & T OFFICERS TO BE CONTACTED FOR PROBLEMS CONNECTED WITH THE COAXIAL CABLES AND FOR PERIODIC MEETINGS BETWEEN THE PUBLIC WORKS DEPARTMENT STAFF AND THE P & T UNITS AT VARIOUS LEVELS

EASTERN REGION : Regional Manager, Maintenance, P & T, Calcutta.

- | | |
|---|--|
| (a) Divisional Engineer Telegraphs
(Coaxial Maintenance), Asansol. | Assistant Engineer (Coaxial Maintenance) P & T
at Asansol Barhi, Sassaram, Patna, Varanasi. |
|---|--|

NORTHERN REGION : Regional Manager, Maintenance, P & T, Kidwai Bhavan, New Delhi.

- | | |
|--|---|
| (a) Divisional Engineer Telegraphs
(Coaxial Maintenance), Kanpur. | Assistant Engineer (Coaxial Maintenance) P & T
at Allahabad, Kanpur, Lucknow, Mainpur, Agra. |
|--|---|

- | | |
|---|--|
| (b) Divisional Engineer Telegraphs (Coaxial Maintenance), Bareilly. | Assistant Engineer Coaxial Maintenance, P & T at Sitapur, Shahjahanpur, Bareilly, Moradabad, Hapur |
| (c) Divisional Engineer Telegraphs (Coaxial Maintenance), New Delhi. | Assistant Engineer Coaxial Maintenance, P & T at New Delhi, Aligarh. |
| (d) Divisional Engineer Telegraphs (Coaxial Maintenance), Ambala. | Assistant Engineer Coaxial Maintenance, P & T at Meerut, Muzaffarnagar, Saharanpur, Ambala, Ludhiana. |
| (e) Divisional Engineer Telegraphs (Micro Wave Maintenance), Jullundur. | Assistant Engineer Coaxial Maintenance, P & T at Jullundur, Amritsar. |
| (f) Divisional Engineer Telegraphs (Coaxial Maintenance), Patiala. | Assistant Engineer Coaxial Maintenance, P & T at Patiala, Bhatinda, Ferozepur. |
| (g) Divisional Engineer Telegraphs (Coaxial Maintenance), Jaipur. | Assistant Engineer Coaxial Maintenance, P & T at Jaipur, Beawar, Udaipur, Himmatnagar, Jodhpur, Nagaur, Bikaner. |

WESTERN REGION: Regional Manager, Maintenance, P & T, CTO Building, Bombay

- | | |
|---|--|
| (a) Divisional Engineer Telegraphs (Coaxial Maintenance), Ahmedabad. | Assistant Engineer Coaxial Maintenance, P & T at Ahmedabad, Baroda, Surat, Balsar. |
| (b) Divisional Engineer Telegraphs (Coaxial Maintenance), Rajkot. | Assistant Engineer Coaxial Maintenance, P & T at Surendranagar, Rajkot, Dhoraji, Junagad, Porbandar. |
| (c) Divisional Engineer Telegraphs (Coaxial Maintenance), Bombay. | Assistant Engineer Coaxial Maintenance, P & T Bombay, Thana, Poona, Karad, Kolhapur and Belgaum. |
| (d) Divisional Engineer Telegraphs (Coaxial Maintenance), Nasik. | Assistant Engineer Coaxial Maintenance, P & T at Nasik, Jalgaon, Manmad and Dhulia. |
| (e) Divisional Engineer Telegraphs (Coaxial Maintenance), Nagpur. | Assistant Engineer Coaxial Maintenance, P & T at Bhusaval, Akola, Amraoti and Nagpur. |
| (f) Divisional Engineer Telegraphs (Coaxial Maintenance), Secunderabad. | Assistant Engineer Coaxial Maintenance, P & T at Secunderabad, Narkatpalli, Kodad and Khammam. |

SOUTHERN REGION: Regional Manager, Maintenance, P & T, Madras

- | | |
|---|---|
| (a) Divisional Engineer Telegraphs (Coaxial Maintenance), Bangalore. | Assistant Engineer Coaxial Maintenance, P & T at Hubli, Davangere, Sirsi, Bangalore and Vellore. |
| (b) Divisional Engineer, Telegraphs (Coaxial Maintenance), Madras | Assistant Engineer Coaxial Maintenance, P & T at Madras, Villipuram, Trichy, Karur, Coimbatore, Dindigul and Madurai. |
| (c) Divisional Engineer Telegraphs (Coaxial Maintenance), Ernakulam. | Assistant Engineer Coaxial Maintenance, P & T at Trichur, Ernakulam, Kottayam, Quilon and Trivandrum. |
| (d) Divisional Engineer Telegraphs (Coaxial Maintenance), Vijayawada. | Assistant Engineer Coaxial Maintenance, P & T at Vijayawada, Guntur, Nellore, Ongole and Naidupet. |

145.4

No. NHIII/P/66/76

Dated the 19th Nov., 1976

To

All State Govts. and Union Territories,
(Deptt., dealing with National Highways)

Subject : Accommodation of underground utility services like electric cables and
pipe lines for water/gas/petroleum products along and across National Highways

In supersession of instructions contained in the previous letters on this subject noted below, I am directed to convey the instructions given in paras 2 and 3 regarding accommodation of underground utility service like electric cables and pipe-lines for water/gas/petroleum etc., along and across the National Highways, for future guidance.

No. WI-43 (16)/64, dated the 7th August, 1964

No. WI-43 (22)/64, dated the 6th October, 1964

No. WI-43 (23)/64, dated the 7th November, 1964

No. WI-43 (22)/64, dated the 22nd March, 1966.

2. Utility services like electric cables and pipe-lines for water etc., should normally not be located longitudinally within the National Highway right-of-way. However, exception to this rule may be made where it is demonstrated to the satisfaction of the State Chief Engineer that any other utility location would be extremely difficult and unreasonably costly, and that the installation within the right-of-way will not adversely affect the design, stability and traffic safety of the highway nor the likely future improvements such as widening of the carriageway, easing of curves etc. For such cases, the State Chief Engineers may themselves accord permission for the laying of utility services provided in the conditions set out in the Annexure, are satisfied. If it is considered necessary to relax any condition, prior approval of this Ministry should be obtained.
3. Whenever any permission is accorded in accordance with the conditions in Annexure, a copy of the approval letter along with a certified copy of an index plan showing the utility line should be forwarded to this Ministry for information and accord.
4. It is requested that the contents of this circular may be brought to the notice of all officers in your Department engaged on National Highway works.

ANNEXURE

CONDITIONS TO BE SATISFIED FOR ACCORDING PERMISSION TO LAY UNDERGROUND UTILITY LINES LIKE ELECTRIC CABLES AND PIPELINES FOR WATER/GAS/PETROLEUM ALONG AND ACROSS THE NATIONAL HIGHWAY

1. Laying of Utility Lines Along the National Highways :

- 1.1. The utility lines shall be located as close to the extreme edge of the right-of-way as possible but not less than 15 metre from the centre-line of the nearest carriageway.
- 1.2. The utility lines shall not be permitted to run along the National Highway when the road formation is situated in double cutting. Nor shall these be laid over the existing culverts and bridges without the prior approval of Government of India.
- 1.3. The lines shall be so placed that at no time there is interference with the maintenance of the National Highways.
- 1.4. These should be so laid that their top is at least 0.6 metre below the ground level or as otherwise directed by the Highway Authority so as not to obstruct drainage of the road land.
- 1.5. For all major bridges of 60 M or more in length to be constructed in future on National Highways, the requirements of the concerned Departments should be ascertained in advance, and suitable provision in the form of ducts etc. made in the Project estimates. Any proposal to lay an electric cable carrying high tension lines should be covered by a certificate that it will not have any deleterious effects on any of the bridge components and roadway safety for traffic.

2. Laying of the Utility Lines Across National Highways

2.1. Location

- 2.1.1. The lines shall cross the National Highway preferably on a line normal to it or as nearly so as practicable.
- 2.1.2. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 metre or as specified by the Highway Authority.

2.2. Method of Crossing

The utility lines shall be permitted to cross the National Highway either encased in pipes or through structure or conduits specially built for that purpose at the expense of the agency owning the line. Existing drainage structures shall not be allowed to carry the lines across unless specially permitted by the Government of India.

2.3. Casing (Conduit) Pipe :

The casing pipe (or conduit pipe in the case of electric cable) carrying the utility line shall be of steel, cast iron, or reinforced cement concrete and have adequate strength and be large enough to permit ready withdrawal of the carrier pipe/cable. Ends of the casing/conduit pipe shall be sealed from the outside, so that it does not act as a drainage path.

2.4. *Length of the Casing/Conduit Pipe :*

The casing/conduit pipe should, as minimum, extend from drain to drain in cuts and toe of slope to toe of slope in the fills.

2.5. *Depth of Embedment of the Casing/Conduit Pipe :*

The top of the casing/conduit pipe shall be at least 1.2 metre below the surface of the road subject to being at least 0.3 m below the drain inverts.

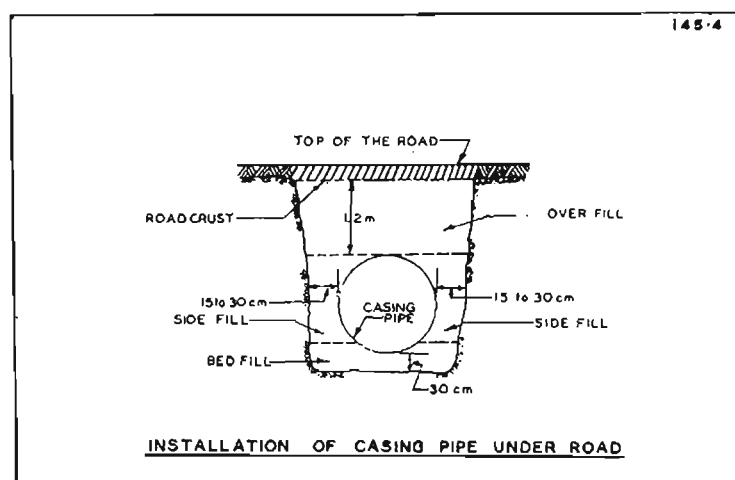
2.6. *Method of Installation of the Casing/Conduit Pipe :*

2.6.1. The casing/conduit pipe may be installed under the road embankment either by boring or digging a trench. Installation by boring method shall be preferred specially where the existing road pavement is of cement concrete or dense bituminous concrete type.

2.6.2. The casing/conduit pipe shall be installed with an even bearing throughout its length and in such a manner as to prevent the formation of a waterway along it.

2.7. *Installation by Trenching Method :*

2.7.1. The sides of the trench should be done as nearly vertical as possible. The trench width should be at least 30 cm. but not more than 60 cms. wider than the outer diameter of the pipe (see sketch attached).



2.7.2. Filling of the trench shall conform to the specifications contained here-in-below or as supplied by the Highway Authority.

2.7.3. Bedding shall be to a depth not less than 30 cm. It shall consist of granular material, free of lumps, clods and cobbles, and graded to yield a firm surface without sudden change in the bearing value. Unsuitable soil and rock edges should be excavated and replaced by selected material.

2.7.4. The backfill shall be completed in two stages (i) Side-fill to the level of the top of the pipe (ii) Overfill to the bottom of the road crust.

2.7.5. The sidefill shall consist of granular material laid in 15 cm. layers each consolidated by mechanical tamping and controlled addition of moisture to 95% of the Proctor's Density. Overfill shall be compacted to the same density as the material that had been removed. Consolidation by saturation or ponding will not be permitted.

2.7.6. The road crust shall be built to the same strength as the existing crust on either side of the trench or to thickness and specifications stipulated by the Highway Authority. Care shall be taken to avoid the formation of a dip at the trench.

2.8. *Precautions When Constructing by Trench Method :*

2.8.1. The excavation shall be protected by flagmen, signs and barricades, and red lights during night hours.

2.8.2. One lane of road shall be kept open to traffic at all times. In case of single lane roads, a diversion shall be constructed at the expense of agency owning the utility line.

3. *General*

- 3.1. Prior approval of the Highway Authority shall be obtained before undertaking any work of installation, shifting or repairs, or alterations, to the utility lines located in the National Highway right-of-ways.
- 3.2. Expenditure, if any, incurred by the Highway Authority for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the agency owning the line.
- 3.3. If the Highway Authority considers it necessary in future to move the utility line for any work of improvement or repairs to the road, it will be carried out as desired by the Highway Authority at the cost of the agency owning the utility line within a reasonable time (not exceeding 60 days) of the intimation given.

145.5

No. NHIII/P/66/76

Dated the 26th March, 1982

To

All State Governments and Union Territories
(Departments dealing with National Highways)

Subject : Laying and protection of coaxial and trunk telephone cables belonging to the Posts and Telegraphs Department on National Highways

For laying the coaxial and trunk telephone cables belonging to the Posts and Telegraphs Department, a consolidated circular was issued *vide* this Ministry's letter No. NHIII/P/66/76 dated 19th November, 1976 in which the conditions and the manner in which the cables were to be laid, were conveyed for adoption in the field. It has been observed that these instructions are not being followed in implementation by the Posts and Telegraphs Department especially in respect of their having prior consultation with the Highway authority. Location of services without proper pre-planning and prior consultations with Highway authorities apart from disrupting the highway construction and maintenance works on hand may necessitate costly relocation/shifting of services at a future date when the developmental works of the highways are to be taken up.

2. In this connection, the State Government authorities dealing with National Highways are requested to establish close liaison with the local P & T Department officials, particularly when the National Highway and P & T expansion works are under finalisation for settling the appropriate locations of services keeping in view the likely developments/improvements on the highway. This would obviate the need for shifting/re-laying of utilities when highway developmental works are taken up in future. For actual laying of the utilities, the concerned highway engineers incharge shall ensure proper location of the services as per the guidelines given in the Ministry's circular dated 19.11.1976.
3. The contents of this letter and the enclosure may be brought to the notice of all the field officers, so that the instructions are scrupulously followed.

145.6

No. NHIII/P/20/77

Dated the 8th April, 1982

To

All State Governments & Union Territories,
(Depts. dealing with National Highways)

Subject : Accommodation of Overhead Electric Power lines on National Highway land

For laying electric power lines and/or erecting the electric poles, the standards have been brought out in the Indian Roads Congress Standard IRC: 32-1969, "Standard for vertical and horizontal clearance of overhead electric power and tele-communication lines as related to Roads". This covers the guidelines for the power lines transmitting 110 Volts. to 650 Volts. In respect of high tension power lines, the following are the instructions for guidance and adoption in the field.

2. *Lateral and vertical clearances of H.T. lines*

- 2.1. The overhead lines and their supporting poles/towers should ordinarily be placed at the extreme

edge of the road land boundary. In any case, these shall be atleast 10 to 12 metres away from the edge of the existing shoulders of the extreme traffic lane. Where the existing roadway is narrower than the minimum required according to standards or where the widening is proposed for any reason, the lateral clearance shall be reckoned with respect to ultimate road way. The pylons of H.T. lines along crossing the road shall be located outside the N.H. land.

- 2.2. In mountainous country the overhead lines should be erected preferably on the valley side and as far away as practicable.
- 2.3. The vertical clearance of the overhead lines crossing the road shall be reckoned from the top of the crown of the road taking into account the anticipated final top level due to future raising of road level, strengthening of pavement, etc. The actual ground clearance of high tension lines for voltage above 650 Volts varies depending upon the Voltage transmitted and these are stipulated in Indian Standard Codes is 5613-1976 Part I to IV and Indian Electricity Rules 1956 as under :

<i>Voltage</i>	<i>Vertical Clearance</i>
66 KV	6100 mm
132 KV	6100 mm
220 KV	7015 mm
400 KV	8840 mm

3. It is necessary that the Electricity Departments have proper pre-planning and prior consultation with the Highway authorities in locating the lines. This, apart from preventing disruption to the highway construction and maintenance works on hand, may avoid costly re-location/shifting of the lines in future when highway developmental works are taken up. It shall be the responsibility of the Electricity Departments to ensure the safety of the highway traffic against the hazards of the high voltage lines.
4. In this connection, the State Govt. authorities dealing with N.H.s. are requested to establish close liaison with the concerned electricity authorities, specially when the National Highway and Electricity authorities expansion and developmental programmes are under finalisation for settling the appropriate location of the lines keeping in view the likely developmental/improvements of the National Highways. This would obviate the need for shifting/relaying of utilities when the National Highway works are taken up in future. For actual laying of lines, the concerned highway engineers incharge shall ensure proper location as mentioned in para 2 of this letter.
5. The contents of this letter may be brought to the notice of all the field officers so that these instructions are strictly followed.

145.7

No. RW/NHIII/P/66/76

Dated the 11th May, 1982

To

All State Governments and Union Territories
(Depts. dealing with National Highways)

Subject : Accommodation of underground utility services like electric cables and pipelines for water/gas/petroleum products along and across National Highways

Consolidated instructions on accommodation of underground utility services mentioned in the subject above were circulated *vide* this Ministry's letter of even number dated 19th November, 1976 in which the conditions and manner in which these are to be laid, were conveyed for adoption in the field.

2. It has been observed that earlier laid down instructions are not being strictly followed in practice especially in respect of the installation of the utilities at site. As brought out in the earlier guidelines, the sides of the trenches, where trenching method is adopted, should be as nearly vertical as possible and should be at least 30 cm but not more than 60 cm wider than the diameter of the pipe. The bedding shall be to a depth not less than 30 cm and should be of granular materials free from lumps and clods. The back-fill should be completed in two stages, (i) side-fill to the level of the top of the pipe, and (ii) over-fill to the bottom of road crust. The side-fill and over-fill material should be laid in layers of 15 cm each and compacted to proper density. The road crust should be built to the same

strength as the existing crust on either side of the trench. Care should be taken to avoid formation of a dip or a hump at the trench. The work should be carried out in one lane while the other lane is kept open to traffic, or suitable diversion is provided in case of single lane roads. All safety measures like signs, barricades, flag-men and red lights during night hours should be provided.

Further, location of services without pre-planning prior consultations and approval of Highway authorities apart from disrupting the highway construction and maintenance works on hand, necessitates costly relocation and shifting of the services at a future date when developmental works of the highways are taken up. It is, therefore, reiterated that the contents of the enclosed letter should be strictly followed. Further, the field officers may be directed to remain in constant touch with the concerned authorities and ensure compliance of these instructions.

145.8

No. RW/NHIII/P/66/76

Dated the 20th August, 1982

To

All State Governments/Union Territories
(Deptts. dealing with National Highways)

Subject : Laying and protection of coaxial and trunk telephone cables belonging to the Posts and Telegraphs Department on National Highways

Please refer to this Ministry's Circular letter of even number dated the 19th November, 1976 regarding instructions for laying and protection of coaxial and trunk telephone cables belonging to the Posts and Telegraphs Department on National Highways. According to para 2.3 of this circular, the repeater stations are to be enclosed by fencing. The Posts and Telegraphs Directorate have now intimated that the fencing around station cabins need to be provided only in such cases where the repeaters are located in private land or in inhabited areas where the problem of squatting may be encountered. In view of this the provision of fencing is not required in other locations like uninhabited areas. However, the requirements of distances from the central line of the nearest carriageway to the repeater station and to the fences where provided shall be as per the Ministry's circular of 19th November, 1976.

2. These instructions may be brought to the notice of concerned officers in your Department dealing with National Highway works.

145.9

No. RW/NHIII/P/32/84

Dated the 13th November, 1984

To

All State and U.T. Chief Engineers of P.W.Ds.
dealing with the National Highway works

Subject : Advance action for location and shifting of utility services in respect of National Highway works.

It is noted that shifting and relocation of utility services such as electricity lines, water lines, telephone cables, etc. take long time and it often leads to time and cost over-run on the National Highway works. It is also observed that the provisions for these items in the works estimates are made on ad-hoc basis or on insufficient data which are invariably found inadequate during actual execution of the work.

2. To avoid such occurrences, it has been decided that once land acquisition estimates have been sanctioned, the PWD should take up the matter with the concerned agencies for removal of these utilities at their cost. Wherever it has been accepted that the cost of removal etc. has to be borne by the NH authority, then necessary steps to obtain expeditiously the estimates from the concerned departments be taken on priority basis and in any case before the estimates for the main projects are prepared. These shall be submitted separately to this Ministry for sanction. This shall ensure availability of funds exclusively for these works and their completion in time so that the work on the highway projects once sanctioned proceeds uninterrupted.
3. It is requested that these instructions may please be conveyed to all concerned in your department for ensuring necessary action.

150 LEVEL CROSSINGS AND OVER/UNDER BRIDGES

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
150.1	Extracts from the Indian Railways General Code, Vol. I	Works for Civil Deptts/Ministries	150/1
150.2	No. I.R.S. (M) dt. 2.5.58	Classification of and Standard Specification for Level Crossings	150/1
150.3	Extract from F. No. PL-67 (8)/69-SP dt. 29.10.69	Tentative Criteria for decision on Replacement of Level Crossings	150/5
150.4	SR-45 (38)/67 dt. 20.3.71	Provision of Road Over/Under Bridges in Replacement of Existing Level Crossings-Apportionment of Cost	150/6
<u>150.5</u> (121.3)	NHIII/P/4/76 dt. 4.2.76	Construction of Road Over/Under Bridges connected with NHs-Levy of Departmental Charges	150/8
150.6	NHIII/P/41/76 dt. 5.8.76	Submission of Detailed Estimates-Relaxation in Present Practice	150/8
150.7	NHI-28 (3)/69 dt. 16.4.77	Provision of Road Over Bridge for NH No. 2	150/9
<u>150.8</u> (604)	TGS (21)/75 dt. 6.1.78	Accidents at Unmanned Level Crossings	150/9
<u>150.9</u> (302)	PL-30 (20)/77 dt. 21.2.78	Gradients for Approaches to Railway Over Bridges on National Highways	150/11
150.10	NHIII/Misc/57/78 dt. 5.7.78	Apportionment from Railway Safety Works Fund for the Overbridges Constructed on Railway Crossings within the Municipal Limits	150/11
150.11	NHIII/P/45/78 dt. 22.12.78	Construction of Level Crossings for new Railway Sidings for Industries etc.,	150/12
150.12	NHIII/P/4/76 dt. 22.1.79	Construction of Road Over/Under Bridges on NHs in Replacement of Level Crossings-Sharing of Cost of Works-Procedure regarding	150/12
150.13	PL-20 (17)/78 dt. 4.7.79	Overhead Charges for Railway Over/Under Bridges for "Deposit Works".	150/12
<u>150.14</u> 4110	RW/NHIII/P/11/82 dt. 27.4.84	Payments to Railway Authorities for Maintenance of Level Rail Crossings on National Highways	See Code No. 4110
<u>150.15</u> (604)	RW/NHIII/P/31/84 dt. 20.11.84	Safety Measures of Railway Level Crossings	150/13

*Extracts from the Indian Railway General Code — Vol. I***WORKS FOR CIVIL DEPARTMENTS/MINISTRIES****1117. Level-crossing, road overbridges and underbridges :**

The cost of level-crossing road overbridges and underbridges constructed at the time of construction of a railway line or at any time thereafter in order to meet a railways' statutory liability under the Railways Act, is chargeable to the railway.

1118. If the construction of a bridge is found necessary otherwise than in pursuance of a railway's liability under the Railways Act, its cost will be borne by the railway if its necessity has arisen from railway requirements, and by the road authority if its necessity has arisen from the growth of road traffic or other requirements of the road authority provided that in either case any extra cost due to additional width or length or other facilities required on account of probable future developments will be borne by the authority requiring such facilities.

1119. If a level crossing is required to be replaced by a road overbridge or underbridge by reason of the growth of both railway and road traffic :—

- (i) the railway will bear the cost of the bridge structure (excluding the approaches) and the cost of diversion of all sewers, cables, gas and water mains within railway limits; and
- (ii) the road authority will bear the cost of the approaches, within or without railway limits the cost of diverting all sewers, cables, gas and water mains outside railway limits and the cost of land for approaches outside the railway limits.

1120. "If a road overbridge or underbridge is required to be extended or widened or rebuilt on a new site, the cost will be borne by the authority requiring the extension or relocation, provided that any extra cost due to additional width or length or other facilities required by any authority shall be borne by that authority." However, where the existing bridge has reached a stage where its regirding or rebuilding is justified on an age or condition basis, the Railway should agree to bear a portion of the cost of the improved bridge to the extent of the expenditure necessary to replace or rebuild the existing bridge to the original standards at present-day rates.

1121. The maintenance and lighting of the roadway of the bridge and its approaches after its opening to public traffic is a charge against the road authority, while the maintenance of the bridge structure generally (excluding the roadway) is a charge against the railways.

1122. If the construction of a new level-crossing or an improvement of alterations in an existing one, whether necessitated by local conditions or any other cause, is asked for by a State Government of local authority, the capital cost of the works asked for will be borne by such Government or authority, except in cases where the liability is that of a Railway under the Railways Act. In regard to the incidence of maintenance costs (as detailed in paragraph 114 (1) and (ii) in such cases no hard and fast rules can be laid down but ordinarily maintenance costs should be borne by the party requiring the facility, and agreement to this effect should be reached before the work is commenced. In a case where the party asking for the facility agrees to pay only the initial cost but declines to bear maintenance, the case should be referred to the Railway Board for orders before any commitment to provide the work is entered into.

Govt. of India Ministry of Railways
(Railway Board)

No. I.R.S. (M) 2nd of May 1928
Revised June 1931 and Corrected
upto April 1957

Extracts from the
Rules for the opening of the
railway

CHAPTER XI
LEVEL CROSSINGS

Classification of, and standard specification for Level Crossings

The classification of level crossings will be settled in consultation with local Governments and Administrations concerned based on the joint consideration of the nature of the road, the number of road vehicles and number of trains passing over the level crossing, and should be as follows :

6. Provision of lights on gates at night

(a)	Light as observed by road users	Red when the gate is closed to the road.. White when open to road	Same as for Special Class	Same as for Special Class	Same as for Special, but reflectors may be provided as alternative to lamps, if posts & chains are provided, no light should be used, but posts should be painted white	Not to be provided	An economical arrangement would be to fit the gate lamp to the revolving hinge posts and to fit to the fixed gate post a cowl to mask the lamp in both direction along the track. If the local conditions make it expedient to fit the lamp in the centre of the gate, a suitable rod operated cowl may be provided.
(b)	Lights as observed by drivers of approaching trains	Red when the gates are closed across the track	Nil	Nil	Nil	Not to be provided.	N.B. This applies also in the case of existing level crossings

7. Interlocking of gates with signals or other protection against trains running through a crossing when open to road traffic.

All gates, if within station limits shall be interlocked with station signals, or if outside station limits with special signals provided at an adequate distance on both sides of the crossings, except in special cases under rules approved by the Senior Govt. Inspector of Railways. Where the sighting by an engine driver of a gate signal outside station limits is inadequate, a warning board should be placed not less than 1320 ft (400 mtrs.) in the rear of the gate signal. The board should be vertical 6'-3" (1900 mm) by 1'-6" (450 mm) with alternate black and yellow stripes 5" wide painted on it	Same as for Special Class if within station limits. If outside station limits gates should be coupled and a warning bell controlled from adjacent stations may be provided	No Special provision to be made unless the line is on the curve and the view is obstructed.	Same as for 'B' Class	Same as for 'B' Class.	Where level crossings are inside station limits they should preferably be beyond the advanced starters or should be at adequate distance [i.e. about 800 ft (250 m)] ahead of the starters and trailing point of the station (see general Rule 35). It is very desirable on busy level crossings to couple both the gates on each side. Where "A" and "B" Class level crossings are outside station limits the clear distance between the crossings and the outer signal should not be less than a full train length.
---	--	---	-----------------------	------------------------	--

at an angle of 45°. The top of the board should be about 12' (3700 mm) above rail level. The board need not be lighted at night.

8.	Width of metalling :						
(a)	Between gates.	Same width as gates	(a) and (b) same as for Special	(a) and (b) same as for Special	(a) and (b) same as for Special C.S.No. 14 dated 11.8.60	(a) and (b) same width as gates.	In the case of 'D' Class crossings the metalling need not be carried beyond 10' (3 m) outside the gates.
(b)	Outside gates upto the railway boundary	Same width as metalling on the road outside the railway boundary					
9.	Formation width of road surface outside gates	Same as the rest of the road outside railway boundary	12 ft. (4 m) wider than the metalling	9 ft. (3 m) wider than the metalling	6* ft. (2 m) wider than the metalling	10 ft. (3 m)	*Way and Works Manual C.S. No. 3 of 17.12.1955.
10.	Gradients of roadway :						
(a)	Between gates :	(a) Level	(a) Level	(a) Level	(a) Level	(a) Level	
(b)	Outside gates	(b) Level for 25 ft. (8 m) and not steeper than 1 in 40	(b) Level for 20 ft and not steeper than 1 in 30	(b) Level for 20 ft. and then not steeper than 1 in 30	(b) Level for 20 ft. and then not steeper than 1 in 20	(b) Not steeper than 1 in 10	
11.	Angle of crossing between gates :	Not less than 45° between centre lines of road and railway	Same as for Special	Same as for Special	Same as for Special	At right angle to the centre line of railway	
12.	Minimum length of straight portion of road outside gates	40 ft. (12 m)	30 ft. (9 m)	20 ft. (6 m)	10 ft. (3 m)	Nil	On important roads except in hill sections these dimensions should, when the cost will not be too great, be increased to 100 ft. for Special and 'A' 75 ft. for 'B' to 50 ft. for C Class level crossings.
13.	Minimum radius of centre line of road on curved approaches within 150 ft. of centre line of railway	200 ft. (60 m)	150 ft.	100 ft.	70 ft.	25 ft.	
14.	Minimum number of Gate-keepers	Three	Two	One	One	One	Gate-keepers will not be provided at "C" and "D" Class crossings where gates or post chains, are not provided. Gate-keepers may be dispensed with at "C" Class level crossings on canal roads which are provided with gates

tem, the following criteria may be followed provisionally while formulating planning proposals :

- (i) Grade separations should be provided in lieu of the existing level crossings on National Highways when the product of gate closures per day and the fast traffic per day on the National Highway in the design year exceeds 50,000.
- (ii) In the case of new constructions including re-alignments and bypasses grade separations might be provided when the product of gate closures per day on the National Highway in the design year exceeds 25,000.
- (iii) Level crossings within shunting limits of railway stations might be given special consideration in preparing proposals for substitution by overbridges because of unusually long duration of closures in such cases.
- (iv) Strategic and other planning factors like opening up of new industries which may not get recognised in the projected traffic figures should also be considered in individual cases involving new constructions.

150.4

No. SR-45 (38)/67

Dated the 20th March, 1971

To

All the Technical Officers in the Roads Wing

Subject : Provision of road over/under bridge in replacement of existing level crossings — apportionment of cost.

A copy of the Ministry of Railways (Railway Board)'s letter No. 68-WI/BRO/25 dated the 21st January 1969 addressed to State Governments and also of the memo bearing the same number and date addressed to General Managers of Railways, is forwarded to all the Technical Officers in the Roads Wing of this Ministry for their information and future guidance in continuation of this Ministry's endorsement No. SR-45 (38)/67 dated the 28th October, 1970.

Enclosures to circular No. SR-45 (38)/67

Dated the 20th March, 1971

COPY OF LETTER NO. 68/WI/BRO/25 DATED THE 21ST JANUARY 1969 FROM THE MINISTRY OF RAILWAYS (RAILWAY BOARD), NEW DELHI TO ALL THE SECRETARIES TO STATE GOVERNMENTS (INCLUDING UNION TERRITORIES), PUBLIC WORKS DEPARTMENT, ETC.

Subject : Provision of road over/under bridges in replacement of existing level crossings-Apportionment of cost

As the State Governments are aware, in accordance with the existing rules if an existing level crossing originally provided at Railway's cost, is required to be replaced by road over/under bridge due to increase in both road/rail traffic the apportionment of cost will be as under :—

- (i) The Railway will bear the cost of bridge structure (excluding the approaches) of 24 ft. width equal to two lanes of road traffic for the total length required to cross the existing or future tracks. In case the width of the level crossing gate is more than 24', the Railway will bear the cost of bridge structure (excluding the approaches) of the width equal to that of the level crossing gate and for the total length required to cross the existing as well as future tracks. In areas close to cities and towns, two foot-paths (each 6 ft. wide) will also be provided, if required by the road authority, at Railway's cost. The Railway will also bear the cost of diversion of all sewers, cables, gas and water mains within railway limits ; and
 - (ii) If additional width of roadway is required by the road authorities, the cost of this additional width will be borne :—
 - (a) fully by the road authorities for the length of the bridge required to span existing tracks; and
 - (b) equally by the Road and Railway authorities for any extra length provided for crossing additional railway tracks, in future.
 - (iii) The Road Authority will also bear the cost of the approaches, within or beyond railway limits, the cost of diversion of all sewers, cables gas and water mains beyond railway limits and the cost of land for approaches outside the railway limits.
 - (iv) The cost of any Road diversion will be shared by the Railway and the Road authority in the same proportion as for total cost of the Road over/under bridge (including the cost of approaches).
2. On a review of the progress made on replacement of busy level crossings by road over/under bridges, it has been observed that the progress during the Third Five Year Plan has been far from satisfactory mainly on account of the delay on the part of the State Governments to allocate necessary funds for their share of cost of such works. While only 28 road over-bridges were completed and 62 were in progress in the III Plan, it has been assessed that in the Fourth Plan 195 busy level crossings would need replacements by road over/under bridges and Railway and State Governments' share of cost for replacement of these level crossing on rough assessment would approximately be Rs 8.85 crores and Rs 18.57 crores respectively.
 3. Keeping in view the persistent demand from the public for replacement of busy level crossings and to further reduce the States' liability for their share of cost, the Ministry of Railways have re-examined

if the following conditions are fulfilled :

1. The gates are normally closed to the road and locked.
2. The roads are the private property of the Irrigation Deptt. and are not Public thoroughfares
3. The keys to the gates are only issued to a few responsible Govt. officials.
4. The traffic over the level crossing is very light.

Gate-keepers may be dispensed with at gates within station limits which are operated by station staff.

15.	Minimum distance of gate lodges from						
(a)	Centre line of the nearest track;	(a) 20 ft (6 m)	(a) 20 ft (6 m)	(a) 20 ft (6 m)	(a) 20 ft (6 m)	(a) 20 ft (6 m)	If the line or approach road is on a curve at or near a crossing, the gate lodge must be built on the outside of the curve.
(b)	Edge of the road metalling	(b) 20 ft (6 m)	(b) 15 ft (4.5 m)	(b) 15 ft (4.5 m)	(b) 10 ft (3 m)	(b) 10 ft (3 m)	
16.	Fencing on lines which are not fenced throughout their length	Minimum length of 50 ft from each gate post	Minimum length of 50 ft from each gate post	Minimum length of 50 ft from each gate post	—	—	If a "C" or "D" Class crossing falls within station limits and is provided with gates or chains fencing must be provided upto 50 ft. at least from each gate post.
17.	Warning to road traffic of the proximity of a level crossing	Conventional signs will where considered necessary be erected by Road Authorities on posts 100 yards from each gate and should be placed closed to the edge of the road on the left of vehicles approaching the crossing	Same as for Special	Same as for Special	Where Chains or gates are provided, the gate posts must be painted white where chains or gates are not provided, posts must still be provided at the position prescribed for gate posts and must be painted white.	Same as for "C" Class	Gates should be painted white with a red disc not less than 2 ft. in diameter in the centre.

Extracts dated 29.10.1969 from notes on F. No. PL-67 (8)/69-SP

Tentative Criteria for decision of replacement on Level Crossings

It has been decided that till the time more authoritative norms had been developed based on cost-benefit studies presently being undertaken at different level crossings on the National Highway sys-

the existing basis for apportionment of cost of such works and have decided that in future the cost of such works excluding the cost of acquisition of any land required for approaches and the structures thereon may be shared by the Railway and the Road authority in equal proportion excepting the cost of extra width required by the Road authorities. This would increase the Railway's liability by about Rs 5 crores during the Fourth Plan and reduce the States' liability for their share of cost to the same extent.

4. Detailed instructions have accordingly been issued to the General Managers of all Indian Railways vide Board's letter of even number dated the 21st January, 1969, a copy of which is enclosed. The apportionment of cost in future for replacement of existing busy level crossings originally provided at Railways' cost for road over/under bridges would be in accordance with detailed instructions contained therein.
5. Ministry of Railways trust that with the further reduction in the Road Authorities' share of cost of such works and the further assistance given to them in the shape of 'Railway Safety Works Fund', it would now be possible for them to expedite the place of replacement of existing busy level crossings by road over/under bridges.

COPY OF MEMO NO. 68/WI/BRO/25 DATED THE 21.1.1969 FROM THE MINISTRY OF RAILWAYS (RAILWAY BOARD), NEW DELHI TO THE GENERAL MANAGERS, ALL INDIAN RAILWAYS

Subject : Provision of road over/under bridges in replacement of existing level crossings — Apportionment of cost

In terms of Board's circular letters No. 60/WI/LX/43 dated 10.6.1968, 26.6.1963 and 18.11.1963, when an existing level crossing originally provided at Railway's cost, is to be replaced by a road over/under bridge due to increase in both road/rail traffic, the apportionment of the cost is to be as under:—

- (i) the Railway will bear the cost of bridge structure (excluding the approaches) of 24 ft. width equal to two lanes of road traffic for the total length required to cross the existing or future tracks. In case the width of the level crossing gate is more than 24 ft., the railway will bear the cost of bridge structure (excluding the approaches) of the width equal to that of the level crossing gate and for the total length required to cross the existing as well as future tracks. In areas close to cities and towns, two foot-paths (each 6 ft. wide) will also be provided, if required by the road authority at Railway's cost. The railway will also bear the cost of diversion of all sewers, cables, gas and water mains within railway limits; and
 - (ii) if additional width of roadway is required by the Road authorities, the cost of this additional width will be borne :—
 - (a) fully by the Road authorities for the length of the bridge required to span existing tracks; and
 - (b) equally by the Road and Railway authorities for any extra length provided for crossing additional railway tracks in future.
 - (iii) The Road Authority will also bear the cost of the approaches, within or beyond railway limits, the cost of diversion of all sewers, cables, gas and water mains beyond railway limits and the cost of land for approaches outside the railway limits.
 - (iv) The cost of any Road diversion will be shared by the Railway and the Road authority in the same proportion as for total cost of the Road over/under bridge (including the cost of approaches).
2. The Board have since reconsidered the matter in view of the slow progress of replacement of busy level crossings by road over/under bridges and the difficulties of the State Governments in finding adequate funds for their share of the cost, and have decided that in future the apportionment of the cost of replacement of busy level crossings originally provided at the Railway's cost by road over/under bridges will be as under :—
- (i) The Railway will bear 50% of the total cost of the over bridge/under bridge including approaches. The total cost referred to above would include the cost of diversion of road, sewers, cables, gas and water mains etc. but would exclude the cost of acquisition of any land, and structures thereon, required for approaches or diversions.
 - (ii) The Road Authority will bear 50% of the total cost of over bridge/under bridge including approaches etc. as referred to above and the cost of acquisition of any land required for approaches and diversions and structures thereon.
 - (iii) The bridge will generally be of 24 ft. width equal to two lanes of road traffic. In areas within or close to cities and towns, two foot-paths (each 6 ft. wide) will also be provided if required by the Road Authority.
 - (iv) If provision is required to be made in the bridge structure for crossing additional railway tracks in future, the cost of such extra length of the bridge structure will be borne by the Railway in addition to its share of the cost for the rest of the bridge and approaches.
 - (v) If additional width of roadway is required by the Road authority over and above the limits of the widths specified in para 2 (iii) above, the cost of this additional width will be borne :—
 - (a) Fully by the Road authority for the length of the bridge required to span the existing tracks.
 - (b) Equally by the road and railway authorities for any extra length provided for crossing additional railway tracks in future.

3. The allocation of the cost of works already sanctioned should not be re-opened because of this decision.
4. The Railway will be responsible for the construction of the over/under bridge proper and the Road Authority for the construction of the approaches. On the actual completion of the work, a completion certificate for the work (excluding cost of land and structures thereon) giving the total cost of the work carried out by the Railway and by the Road Authority separately, will be signed by the representatives of the State Government/Road Authority and the Railway. The amount incurred by any part in excess of 50% of the total cost will be reimbursed by the other party. With a view to ensure that the amount required to be spent in excess of the sanctioned share does not remain under suspense in the books of the party responsible for the execution of the work, arrangement will have to be made with the State Governments for the immediate adjustment in the same year's accounts through transfer transactions of any amount spent by either party in excess of its share of the cost of the bridge.
5. Necessary Correction Slip with reference to Para 1119 GI of Indian Railways General Code Vol. I embodying the fore-going principles will be issued in due course.

150.5
121.3

No. NHIII/P/4/76

Dated the 4th, Feb., 1976

To

All State Governments, All State Chief Engineers
(Department dealing with National Highways)

Subject : Construction of road/over/under bridges connected with National Highways — Levy of departmental charges

I am directed to forward herewith a copy of the Ministry of Railway's (Railway Board) letter No. 75/WI/BRO/15, dated the 12th November, 1975, addressed to the General Manager, All Indian Railways, on the subject noted above for your information and guidance.

No. 75/WI/BRO/15

Dated the 12th November, 1975

To

The General Managers, All Indian Railways

Subject : Construction of road over/under bridges connected with National Highways — Levy of departmental charges

The matter regarding levy of departmental charges in respect of road over/under bridges falling on National Highways has been under consideration of the Board for some time past. It has now been decided in consultation with the Ministry of Shipping and Transport (Roads Wing) that the Railways should levy departmental charges @ 12½% (in terms of para 1049-E) uniformly on all Works of road over/under bridges on National Highways, carried out by them, for and/or on behalf of the Union Ministry of Shipping and Transport in any of the States. The Ministry of Shipping and Transport also have agreed to levy these charges at the same rate (12½%) for all works carried out by them for and/or on behalf of the Railways whether departmentally or through any of their agencies. This should be ensured.

2. The question of levy of departmental charges in the past cases should, however, not be affected by this decision.

150.6

No. NHIII/P/41/76

Dated the 5th August, 1976

To

All State Governments
(Departments dealing with Roads)

Subject : Submission of detailed estimates and detailed designs/drawings for road over/under bridges by the Zonal Railways for approval of the Roads Wing-Relaxation in the present practice

I am directed to say that for road-over/under bridges to be constructed by the Railway Authorities on National Highway crossings (either as full deposit works or where the cost is to be shared between the Railways and the Roads Wing), the practice so far was that the Railways were

required to send detailed estimates, designs and drawings to this Ministry through the State Public Works Departments concerned for technical approval and financial sanction. Due to a large increase in the number of road-over/under bridges programmed to be taken up in the 4th Plan and thereafter, considerable delays have been occurring in correspondence relating to technical approvals from this Ministry to detailed designs and drawings as well as in the preparation of detailed estimates and forwarding the same to this Ministry. It was, therefore considered desirable, to streamline and simplify the existing procedure. Accordingly, it has now been decided, in consultation with the Ministry of Railways (Railway Board), to adopt the following revised procedure henceforth :

- (1) Based on the General arrangement drawings to be approved by the Roads Wing (and subject to modifications or suggestions if any made by them in regard to the general requirements of siting, alignment, horizontal and vertical profiles, final road levels, roadway footpaths, design loadings and material specifications etc.), the railways will prepare abstract estimates, designs and drawings, and accord technical approval for the Road overbridge proper.
 - (2) Then, the Railways need send only abstract estimates (with quantities and costs for different items) to this Ministry through the respective State Public Works Departments. This Ministry will have a broad scrutiny of the abstract estimates and accord financial sanction for their share of cost. If there are any glaring discrepancies in quantities etc., the same will be pointed out to the Railways for necessary corrections. Thereafter the Railway Authorities will issue financial sanction to meet their share of cost.
 - (3) In any particular case involving R.C.C. or prestressed concrete designs, the Railways, if they so desire, may send up detailed designs and drawings also for the views or comments of this Ministry, and the same may be got incorporated suitably, in their designs and estimates, before the Railways accord final technical approval to the scheme and before forwarding abstract estimates to this Ministry.
2. Instructions on the above lines have already been issued to the General Managers of all the Indian Railways vide Railway Boards' letter No. 75/WI/BRO/37, dated the 11th March, 1976.

150.7

No. NHI-28 (3)/69

Dated the 16th April, 1977

To

The Secretary to the Govt. of Uttar Pradesh, P.W.D., Lucknow.

Subject : Provision of Road Over Bridge for National Highway No. 2 across the Railway Track at Km. 335/0-1 (Mile 219/12-13) between Mathura Junction and Bhainsa Railway Stations on the North Eastern Railway

With reference to letter No. 3481 NHG/90 N/70, dated the 26th February, 1977, from the State Chief Engineer (National Highways) and in continuation of this Ministry's letter No. NHI-28 (3)/69-Pt., dated the 28th May, 1973 on the subject noted above, I am directed to say that it has been decided in the meeting held on 14th March, 1977 in the chamber of Director General (Road Development) and Additional Secretary between the representatives of Ministry of Railways (Railway Board) and this Ministry that maintenance charges @ 3% may be paid to the Railways as an ad-hoc measure including arrears, if any on this account in respect of Road over bridge on National Highway No. 2 across the Railway Track at Km. 335/0-1 between Mathura junction and Bhainsa Railway Station on North Eastern Railway, subject to adjustment later on when an agreement is reached between the Road Authority and Railway Administration on the basis of fixing up a realistic percentage of maintenance charges for the over bridges based on the separate expenditure figures which may be incurred by the Railways on the maintenance of various type of over bridges over the various Zonal Railways during the next 2 to 3 years. I am, therefore, to request that arrangements may be made to make the payment to the North Eastern Railway, Gorakhpur, of the maintenance charges including arrears, if any, in respect of the aforesaid bridge, @ 3% of the cost of construction of the bridge, as an ad-hoc measure out of the funds allotment to the State Government for the Maintenance and Repairs of National Highways.

150.8
604

No. TGS (21)/75

Dated the 6th January, 1978

To

All State Governments/Union Territory Administrations

Subject : Accidents at unmanned level crossings

I am directed to refer to this Ministry's letter of even number dated 13.10.76 (Appendix I) and to say that the question of providing speed breakers (bumps) at level crossing has been further examined

by this Ministry on a reference from the Ministry of Railways.

2. Since continuing accidents at unmanned level crossings between trains and road vehicles are a source of serious concern having regard to the loss of life and property involved. It has been decided in partial modification of the Ministry's letter numbered above, that as a special case speed breakers (bumps) may be constructed on approaches to unmanned level crossings provided no other suitable measures are possible for the prevention of accidents at such locations. The speed breakers must however have a smooth profile and proper pavement markings on the lines of the sketch enclosed.
3. On the other hand it should be noted in the case of manned level crossings that speed breakers are not repeat, not to be provided for this purpose and other means like signs, flashing signals, rumble strips etc. along should be employed to check the incidents of accidents.
4. It is requested that action may be taken in the matter as indicated above.

Appendix-I

Letter No. TGS (21)/75 dated the 13.10.76 from Ministry of Transport addressed to Ministry of Railways, Railway Board, New Delhi etc.

Subject : Accidents at level crossings

I am directed to refer to para 3 of this Ministry's letter of even number dated the 19th September, 1975, wherein it has been suggested that the speed breakers (bumps) be provided on the approach roads to all the crossings to check the accidents at the Railway level crossings. Roads Wing in this Ministry have advised that it is not desirable to provide such speed breakers (bumps) at approaches to Railways level crossing. For the purpose of checking speed near level crossing other means like flashing/signals/rumble strips should be employed. The suggestion regarding the provision of speed breakers (bumps) at such crossing need not be followed and that for the purpose of checking speed at level crossing raised road signs being notified shortly should be installed on the approaches to all Railway crossings falling on NHs as well as other State roads according to the yardstick specified therein. In this connection, attention is also invited to this Ministry (Roads Wing) letter No. PL-50 (8)/72 dated 4.6.76.

No. PL-50 (8)/72

Dated the 4th June, 1976

To

The Secretaries to the State Public Works Departments dealing with National Highways, and copy endorsed to all Chief Engineers/Addl. Chief Engineers/Principle Engineers of the State P.W.Ds. dealing with National Highways.

Subject : Construction of speed breakers on National highways

It has come to Ministry's notice that at many places on National Highways, local authorities are constructing road humps i.e. speed breakers, to check the speed of vehicles. This is undesirable as the function of National Highways is to facilitate movement of through traffic and not to hinder it. Speed breakers can be a source of serious hazards and accidents to the fast moving vehicles. Generally the use of speed breakers is restricted to residential locations or areas with a specialised land use such as university or hospital campuses. Their use on through roads is incorrect and needs to be deprecated.

2. After careful consideration, it has been decided that henceforth speed breakers should not be permitted on the National Highways. At particular locations where control on speed is regarded necessary for specific reasons, this may be ensured through speed limit signs and strict and rigorous enforcement.

Alternatively, the provision of rumble strips or flashing signals may be considered to alert the drivers through audible/visual stimuli. A common application of rumble strips is the placement of intermittent, raised bituminous overlays across the roadway. Raised sections can be 15-25 mm high, 200-300 mm wide, and spaced about one metre centre to centre. A series of such strips roughly 15-20 at one location, can caution the motorists sufficiently through combination of vibrations and rumbling noise. Since coarse textured overlays are more effective, the raised sections should consist either of premixed carpet or bituminous surface dressing. As a rule, the decision about design and placement of flashing signals/rumble strips should be preceded by a careful examination of the circumstances obtaining in each case.

3. It is requested that these instructions may please be given wide publicity among the concerned officers in your department.

150.9
302

No. PL-30 (20)/77

Dated the 21st February, 1978

To

Chief Engineers/Addl. Chief Engineers of all State PWDs
and Union Territories dealing with National Highway Works

Subject : Gradients for approaches to Railway Overbridges on National Highways

Reference is invited to Ministry's letter No NHI-37 (2)/70 dated the 2nd April 1970, enclosing *inter-alia* a copy of the geometric design standards for National Highways. In para 4 (a) of these standards it was mentioned that as a general rule summit curves on approaches to railway overbridges should be designed for overtaking sight distance. To ensure this, in most normal situations in plain terrain the gradients on approaches for design purpose must be flatter than about 1 in 50. In some recent cases, the Railways have expressed that such gradients would be expensive and instead the ruling gradient of 1 in 30 as set out for general road alignment in para 6 of the said standards should be followed.

2. In the above context, the overall criteria for profile design on approaches to railway overbridges have been reexamined in the Ministry. Keeping in view aspects like the minimum visibility requirements for safe traffic operation, convenience to slow moving traffic, and overall economy, it has been decided that approaches to railway overbridges on two-lane National Highways in plain terrain should henceforth be designed on the following basis :—
 - (i) Instead of overtaking sight distance, the summit curve (s) should be designed for intermediate sight distance (explained in IRC : 66-1976) corresponding to the ruling design speed;
 - (ii) The approach gradients for design of profile should normally be taken as 1 in 50 (see also (iv) below);
 - (iii) For bridges upto 30 m span, a single vertical curve should be provided over the deck with the objective of improved aesthetics and reduced earthwork quantities;
 - (iv) Cases involving special conditions, e.g. proper coordination between horizontal and vertical curves, presence of sloping ground etc. should be dealt with individually on merits.
3. It is requested that the contents of this circular may be brought to the notice of all officers in your Department engaged on National Highway Works.

150.10

No. NHII/Misc./57/78

Dated the 5th July, 1978

To

All the State Government Public Works Departments
(dealing with Roads)

Subject : Apportionment from Railway Safety Works Fund for the overbridges
constructed on Railway crossings within the Municipal limits

I am directed to say that at the 6th Joint meeting of the Central Council for Local Govt. and Urban Development and Executive Committee of All India Council of Mayors held on 29th October, 1977 an item sponsored by the Solapur Municipal Corporation on "Railway Crossings within the Corporation Limits for which over-bridge need to be constructed" was considered. It was proposed that a definite portion of the Railway Safety Fund should be set apart for the construction of over-bridges within the municipal/corporation limits. A resolution was passed in the meeting that the matter should be taken up with the Ministry of Railways. Accordingly, the Ministry of Railways was requested to furnish their views. That Ministry has expressed the view that it is the duty of the State Governments to include schemes for the construction of road over-bridges in Municipal areas and ask for reimbursement out of the Railway Safety Works Fund. The schemes should be selected by State Governments concerned on merits, taking into account the rail/road traffic and the detention caused. I am, therefore, to request that necessary action in the matter may please be taken accordingly under intimation to this Ministry.

No. NHIII/P/45/78

Dated the 22nd December, 1978

To

All Technical Officers/All R.Os./ELOs/DS (P & B) All Under Secretaries etc.

Subject : Constuction of level crossings for new Railway Sidings for industries etc.

It has been decided as a matter of policy not to permit level crossings for new Railway sidings for industries whether private, public or joint sector. In each such case we should insist on a rail over/under bridge even if the daily number of trains be very small. The above decision which has the concurrence of Director General (Road Development) may please be kept in view while dealing with requests for permission to construct level crossings on new railway sidings.

No. NHIII/P/4/76

Dated the 22nd January, 1979

To

All State Governments
(Departments dealing with National Highways)Subject : Construction of road over/under bridges on National Highways in
replacement of level crossings — sharing of cost of works — procedure regarding

It has come to the notice of the Ministry that uniform procedure has not been followed in preparing estimates for approaches to road over/under bridges on National Highways in replacement of level crossings where the cost is to be shared between the road authorities and the railways. Though, the railways are including the cost of field staff, regular establishment working in the Headquarters in addition to the normal 2% work charges establishment in the estimates for the construction of road over/under bridges (to be executed by the railways) but the State Government do not include agency charges on the Railways' share of cost in the estimates for the construction of approaches to be executed by this Ministry. As the State Governments are aware that all the National Highway works are executed by them on behalf of the Government of India and the 9% agency charges are reimbursed to them to compensate for the organisational inputs covering cost of establishment tools and plants etc. which they deploy on the execution of National Highway Works, it is but appropriate that the Agency charges should also be included in the estimates for approaches as these charges are analogous to those being included by the Railways in their estimates. Accordingly, this matter was taken up with the Ministry of Railways (Railway Board) and they have now agreed to the inclusion of 9% agency charges on the Railway's share of cost of approaches to the road over/under bridges on National Highways which are constructed in replacement of existing level crossings. I am, therefore, to request that in future the Agency Charges may invariably be included in all estimates for the construction of approaches to road over/under bridges on National Highways, the cost of which is to be shared by the Railways.

No. PL-20 (17)/78

Dated the 4th July, 1979

To

All the State Chief Engineers, PWD
(dealing with Roads)

Subject : Overhead Charges for railway over/under bridges for "Deposit Works"

I am directed to state that this Ministry had approached the Ministry of Railways (Railway Board) to ascertain the practice being followed by the Railways for the preparation of estimates for 'Deposit Works'. A copy of their Office Memorandum No. 78/WI/BRO/59 dated June 2, 1979 received in reply is enclosed for your information and guidance. In case it is noticed by your organisation that the General and Other Charges are abnormally high in any particular case for 'Deposit Works' for any railway over/under bridge, you could, as suggested by the Ministry of Railways in para 3 of their above cited O.M. take up the matter with the concerned Railways or with the Railway Board for suitable reduction/modification.

COPY OF O.M.No. 78/WI/BRO/59, DATED THE 2ND JUNE, 1979 FROM THE MINISTRY OF RAILWAYS (RAILWAY BOARD), NEW DELHI TO THE MINISTRY OF SHIPPING & TRANSPORT (ROADS WING), TRANSPORT BHAVAN, NEW DELHI.

Subject : Overhead charges for railway over/under bridges for Deposit Works.

Ref : Ministry of Shipping & Transport O.M. No. PL-20 (17)/78 dated 27.7.78.

The undersigned is directed to state that information was called for from the Railways to ascertain the practice being followed by them for the preparation of estimates for the deposit works. It may be pointed out that Railways prepare estimates for "deposit works" in the same manner as for their own works. The only extra item included in "deposit works" is the element of "departmental charges". Levy of departmental charges @ 12½ is mandatory for all "deposit works". These have to be levied on the total cost of the work.

2. The total cost of the work includes all items of expenditure such as cost of labour, staff, officers (supervising and others), materials, freight (including loading/unloading), accommodation, office, plant & equipment, etc., specifically provided for the execution of the work. Part of these charges are levied as "General charges" freight/incidentals etc. These charges form part of the works and are provided at the same scale even in the case of railway's own works. Over and above these charges "departmental Charges" (not meant to substitute for any of these charges) are levied by the Railway. General Manager, has, however, the discretion, subject to certain conditions to waive these "departmental charges" in full or in part.
3. It has also been observed that Railways levy general and other charges within accepted scale. It may vary somewhat depending on the nature of work, site conditions, working of the railway etc. It will be appreciated that it is neither advisable nor possible to enforce rigid uniformity in this regard. However, cases where any charges are deemed to be unusually high, may be referred to the Railway concerned or this Ministry for consideration.

150.15
604

No. RW/NHIIP/31/84

Dated the 20th November, 1984

To

1. All Chief Engineers of State and U.T. P.W.D.
2. D.G. Border Roads, New Delhi
3. D.G. Works, C.P.W.D., New Delhi

Subject : Provision of safety measures at Railway level crossings falling on National Highways

There have been reports of repeated incidents of gate crashing of the manned level crossings located on National Highways due to variety of reasons. To reduce such incidents it is necessary that following safety measures are adopted immediately :

- (1) Installation of latest IRC road signs indicating whether the railway crossing is manned or unmanned.
 - (2) Imposition of speed limits on approaching traffic and installation of relevant road signs.
 - (3) Provision of rumble strips on both sides of the Railway Crossings as per specifications given in this Ministry's letter No. PL-50 (8)/72-NHVI dated 4th June 1976. Speed breakers shall not be permitted.
2. It is requested that these measures may be got implemented at all needed locations in a time bound programme from the normal M & R grants. The progress achieved may be intimated to this Ministry in the quarterly reports.

160 LEVY OF FEES AND TOLLS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>160.1</u> (143.1)	PL-13 (7)/51 dt. 16.2.54	Acceptance of Central Financial Liability for the Development and Maintenance of Road Links within large Towns Served by NHs	See Code No. 143.1
<u>160.2</u> (143.1)	WI-1 (6)/54 dt. 1.6.57	—do—	—do—
<u>160.3</u> (112)	The NH (Amendment) Act 1977	Amendment to the NH Act, 1956	See Code No.112
<u>160.4</u> (114)	Notification SO-718 (E) dt. 15.11.78	NH Rules for Levy of Fees for use of Permanent Bridges	See Code No. 114
160.5	PL-23 (1)/77 dt. 18.12.78	Levy of Fees on Permanent Bridges Costing more than Rs 25 lakhs each Completed and Opened to Traffic on or after 1.4.76 on NHs	160/1
160.6	PL-23 (1)/77 dt. 30.9.80	—do—	160/3
<u>160.7</u> (114)	Notification dt. 15.12.80	Amendment of Rules of 1978 (Fees for use of Permanent Bridges)	See Code No. 114
160.8	PL-8 (5)/77 dt. 22.12.80	Fee for use of Permanent Bridges-NH Rules 1978	160/4
160.9	RW/PL-8 (5)/77 dt. 24.9.81	NHs (Fee for the Use of Permanent Bridges) Rules 1978	160/4
<u>160.10</u> (114)	Notification SO 6 (E) dt. 10.12.81	Amendment of Rules of 1978 (Fees for use of Permanent Bridges)	See Code No. 114
160.11	RW/PL-8 (5)/77 dt. 23.4.82	Levy of Fees on Permanent Bridges Costing more than Rs 25 lakhs each Completed and Opened to Traffic on or after 1.4.76	160/5
160.12	NHVI-50 (3)/83 dt. 7.6.83	Advance Action for Construction of toll Collection Plazas for Bridges on NHs costing more than Rs 25 lakhs Completed and Opened to traffic on or after 1.4.76	160/5
160.13	NHIII/P/23/84 dt. 26.7.84	Purchase of Cars etc. from out of 'Fee' Money from Permanent Bridges on NHs given to the State Public Works Department for NHs Development Works	160/5
160.14	PL-23 (1)/77 dt. 24.9.84	Levy of fees on permanent Bridges Drawings Showing Typical Layout of Fee Collection Plazas and Type Design for Fee Collection Booths	160/6
<u>160.15</u> 121.2	PL-23 (1)/77 dt. 20.5.85	Provision of Construction of Toll Plazas	160/6

No. PL-23 (1)/77

Dated the 18th December, 1978

To

The Secretary to the Govt. of
(By name dealing with National Highways)
All States and Union Territories

Subject : Levy of fees on permanent bridges costing more than Rs 25.00 lakhs
each completed and opened to traffic on or after 1st April 1976 on National Highways

I am directed to say that, as per Section 7 of the National Highways Act, 1956, the Central Government may by Notification in the official Gazette, levy fees at such rates as may be laid down by rules made in this behalf for services or benefit rendered in relation to use of ferries, temporary bridges and tunnels on National Highways. This provision has since been amended by National Highways (Amendment) Act 1977 (No. 30 of 1977) published in the Gazette of India (Extraordinary) No. 46 so as to provide for the levy of fees on permanent bridges also, costing more than Rs 25.00 lakhs each, completed and opened to traffic on or after 1st April 1976.

2. A copy of the aforesaid National Highways (Amendment) Act, 1977 is enclosed (Appendix I-See code 112). The Government of India have since formulated detailed rules on the subject, a copy of which is enclosed (Appendix II-See code 114). Action now has to be initiated by the State Governments/Local Administrations concerned with National Highways to collect on behalf of the Government of India fees as per these rules on permanent bridges on National Highways costing more than Rs 25.00 lakhs each completed and opened to traffic on or after the 1st day of April 1976. The rules are self-explanatory.
3. I am to add that these fees are intended to be levied for a limited period only and are to be discontinued as soon as the full capital cost of the bridge including interest thereon as also the maintenance and special repairs expenditure thereon upto the date of discontinuance of the levy of fee has been recovered. Further it is also intended that in the metropolitan cities like Delhi, Bombay, Calcutta and Madras bridges on National Highways situated within the Metropolitan cities should be exempted from the proposed levy.
4. While separate administrative orders in regard to both the issues mentioned in para 3 above may issue separately also, this requirement is being incorporated in this letter also, so that while levying fees, the States should keep these two requirements in view. Meanwhile, the State Governments/Local Administrations may kindly send to this Ministry for their consideration immediately their proposals in respect of bridges which they would like the Government of India to consider for exemption from the levy of the proposed fees with reference to metropolitan cities referred to in para 3 above.
5. I am to add that while arranging for the collection of these fees, it has to be ensured that the process of collecting the fees is easy and speedy with all possible care taken to ensure that there is no unnecessary hold up of traffic.

I am accordingly to request that in order to achieve these objectives, the following actions may be taken immediately:

- (a) set up adequate fee collection booths with reasonable staff keeping in view the traffic requirements,
 - (b) improve approach roads to collection booths by widening the existing roads and constructing new traffic lanes where necessary.
6. So far as fee collection booths, improvement of approach roads etc. are concerned, necessary plans and estimates may be prepared for sanction for being financed from the National Highway (Original) Works allocations available to the State. As for collection expenses, the Government of India will reimburse to the State Government collection charges as per rule 10 (of the enclosed rules), equal to a sum not exceeding 12% of the toll collection within the State/Union Territory. The collection charges would be reimbursed to the State Government at the time of final payments in respect of National Highway (Original) works on receipt of specific demand from the State Government which may be sent to this Ministry regularly and in time. As already laid down in the enclosed rules vide rule 2 (d), the fee shall be levied on mechanically propelled vehicles only and would not include a cart, tonga, hand-driven or cycle rickshaw, bicycle, tricycle and any other animal or hand driven vehicle, as also pedestrians. Further, the proceeds from the fees excluding the collection charges shall be allowable to each State Government/Local Administration on the lines indicated in rule 10 of the enclosed rules.

7. In order to provide for a broad guide to the States to take necessary action in the matter on the lines indicated above, broad guidelines have also been formulated by this Ministry a copy of which is enclosed (Appendix III). In addition, drawings showing typical lay out of fee collection plaza and type design for fee collection booths are also enclosed. (Appendix-IV See code 160.14). These guidelines, type designs etc. are intended to serve as a broad guide and could be suitably modified to suit local requirements, if necessary, under intimation to this Ministry, the guiding motive in all cases being speedy and easy collection of fees with all possible convenience to the public, and least possible hindrance to traffic.
8. I am to add that the location of the site for the fee collection booths should be decided in consultation with the Regional Officer of this Ministry. Immediate action is requested under intimation to this Ministry.
9. I am further to add that the Government of Maharashtra are levying tolls on the bridge across the Thana Creek near Bombay and it is felt that the method of collection adopted by them is functioning very successfully with ease, speed and convenience. I am, therefore, to suggest that if the State Government consider it necessary, they may as well arrange for their representative to see the fee collection management system in operation at the Thana creek bridge near Bombay for adoption in your State/ Union Territory.

Note : Drawings of fee collection plaza not printed.

APPENDIX III

GUIDELINES ON LAYOUT AND MANAGEMENT OF FEE COLLECTION PLAZA FOR BRIDGES

1. General

- (i) The fee collection process should be speedy and avoid undue delays;
- (ii) The design of the collection plazas should be such that they are economical, efficient and aesthetically pleasant;
- (iii) The fee collection staff should be quick and courteous. They should be trained adequately before deployment.

2. Location of fee Collection Plaza

- (i) The collection plaza should be so located that it has good visibility for the approaching traffic.
- (ii) Where the bridge involves high approaches, it will be advantageous from economic angle to build the plazas at the start of the approaches since the height of the embankment would be comparatively less.
- (iii) The location should be free of any risk from flooding, submergence etc. and should be generally away from road intersections/rail crossings.

3. Layout and Design of Plazas

- (i) Total number of lanes at the plaza will be dictated by traffic volume, peak hour traffic intensity etc. Usually at least two lanes will be required for each direction, one for fast traffic (Mechanical vehicles) and the other for slow traffic (not liable to pay the fee). For higher traffic volumes, three lanes in each direction may be required. The fundamental consideration in deciding the number of lanes should be that vehicles are cleared at the fee booths expeditiously.
- (ii) Typical layout of a six-lane fee collection plaza (3 lanes for each direction) is shown on enclosed Drawing No. STDS/R/A/1/78, by way of illustration. Designs of Plazas with lesser number of lanes could be suitably worked out by the States themselves.
- (iii) The fee collection booths should be structurally adequate, and of such a construction that these can be speedily erected.
- (iv) Suitable roofing should be provided over the fee collection booths across the full width of the road so as to provide protection to drivers from rain at the time they stretch out their hands for payment of the fee.
- (v) A suitable sign system should be installed in advance to guide the traffic about presence of the fee collection booths, as also for providing information about the quantum of fees to be paid by different types of vehicles. As required, the sign system should cover Hindi, English and the regional language (where it is other than Hindi).
- (vi) Necessary pavement markings should be provided in the entire plaza complex and these should be maintained regularly. Further, guidance in this regard can be had from Indian Roads Congress standard No. IRC : 35-1970.
- (vii) If found necessary, suitable counter check booths may be constructed on both sides beyond the fee collection booths to verify the fee receipts.

4. Fee Collection Booths And Mechanism of Collection :

- (i) Type design for fee collection booths is shown in drawing No. STDS/R/A/2/78 enclosed. The design or appearance of the booths could vary to suit the landscape of the area and locally available materials.
- (ii) The booths should be structurally sound, and at the same time blend with the natural landscape of the area.

- (iii) Fees should be collected manually. The procedure would be that the driver stops abreast of the fee collection booths, pays the prescribed fee by extending his hand out of the vehicle window, obtains the receipt in return, and pushes off. (In due course, introduction of manual-cum-partially mechanised, or partially automatic systems will be considered where feasible, gradually starting at bridges near bigger cities of towns where electricity could be assured at all times. In addition, as a possible check, the States, in consultation with the Ministry, may install buried counters in each lane to ascertain the total number of vehicles passing through the bridge).
- (iv) The counter staff should be provided with sufficient quantity of small denomination notes and change at the start of each shift.
- (v) In larger fee collection plazas, intercom telephones may be provided between the booths and office of the supervisor.
- (vi) If a booth is to be closed for any reason, incoming traffic should be guided into the adjoining working booth with the help of appropriate barriers and signs. Red lamps should be used during hours of darkness.

5. Miscellaneous

- (i) The environment of the fee collection complex should be improved by landscaping with flowering plants, decorative bushes etc.
- (ii) The whole fee collection complex should be lighted adequately.

Note : Drawings referred to above are not printed.

160.6

No. PL-23 (1)/77

Dated the 30th September, 1980

To

The Secretary to the Govt. of
(By name dealing with National Highways).
All States and Union Territories.

Subject : Levy of fees on permanent bridges costing more than Rs 25.00 lakhs each completed
and opened to traffic on or after, 1st April, 1976 on National Highways

I am directed to invite a reference to paras 3 and 4 of this Ministry's letter of even number dated 18th Dec. 1978 on the subject noted above wherein it had been indicated that it was intended *inter alia* that in metropolitan cities bridges on National Highways situated within the metropolitan cities should be exempted from the proposed levy and that a further communication would follow regarding the definition of metropolitan cities proposed to be exempted from the proposed fees. This Ministry have since examined this matter in consultation with the Ministry of Works & Housing who are concerned with various matters relating to urban development and it has been decided that in the light of the position explained below all such urban areas/cities/urban agglomeration as have a population size of one million or above may be considered to be metropolitan cities for purposes of exemption from the levy of fees :—

- (1) Population census is the main source of information and classification of human information settlements including urban areas. Upto 1971 census, however, no standard definition of metropolitan cities was adopted. However, recently, in connection with the ensuing population census 1981, a uniform nomenclature for different sizes of urban areas has been agreed upon. According to his nomenclature, 'metropolitan city' is a city urban agglomeration with population size of one million or above.
 - (2) The State Government is to issue a notification defining the actual areas of a metropolitan city and if a bridge on National Highway falls within the metropolitan areas so defined, it may be considered for exemption with prior approval of the Govt. of India.
2. I am to request that further action may kindly be taken in the light of this position and necessary notification issued with a copy to this Ministry. If a bridge is proposed to be exempted, prior permission of this Ministry may be obtained.

No. RW/PL-8(5)/77

Dated the 22nd December, 1980

To

All State Govts/U.Ts.
(PWD Depts concerned with NHs)

Sub : National Highways (Fees for the use of Permanent Bridges) Rules, 1978

I am directed to invite a reference to this Ministry's letter No. RW/PL-8(II)/76, dated 26th April 1976 on the subject noted above and to say that even though the rules provide the collection of fees through departmental agencies only, representations have been received from several states for collection of fees through the alternative of contractual arrangements as well. As the State Govt. are aware, this proposal had been discussed in detail at the meetings of the Standing Committee on Roads of the Transport Development Council and T.D.C. held on the 1st and 2nd August 1980 respectively, and was also discussed further at the meeting of All India Chief Engineers held at Srinagar on the 22nd Aug. 1980 where the consensus was that the States might be given the choice of collecting fees either departmentally or through the arrangements of contractors. This proposal has since been examined further and it has been decided to amend the rules to provide for the collection of fees through contractual arrangements also as an alternative method of collecting fees. A copy of the Notification issued by this Ministry in this connection is accordingly enclosed.

2. I am to add that while going in for collection of fees through private contractors, it should be fully ensured by the State Govt. that as already indicated in the case of departmental collection of fees the process of collecting fees through contractors arrangements is also easy and speedy and all possible care is taken to ensure that there is no unnecessary hold up of traffic. In order to achieve this objective, the State Govt. also have to ensure that adequate fee collection booths are set up with reasonable essential staff of the contractor keeping in view the traffic requirements and action is taken by the State P.W.D. also to improve approach roads to collection booths by widening the existing roads and constructing new traffic lanes where necessary. The State P.W.D. must also supervise the installation and functioning of the arrangements well all the time.

3. I am further to add that while going in for contractual arrangements for the collection of fees sufficient safeguards may be taken as indicated below to ensure that the system of collecting through contractors functions smoothly and properly :

- i) A specified security deposits may be laid down depending on the amount of collection and it should be returned only after the lease expires finally.
- ii) The State Govt. should reserve to themselves the right of cancelling the bid/auction in case they feel that the auction/bid money is less than a specified minimum amount, which may indicate in advance, taking into account the likely revenue from the fees;
- iii) Since, as indicated in para 2 of this Ministry's letter No. PL-23(1)/77, dated 18.12.78, the intention is to discontinue the levy of fees as soon as the cost of the bridge (as defined under rule 2(e) of the National Highways (Fees for use of Permanent Bridges) Rules 1978, including interest thereon as also maintenance and special repairs thereon, is recovered, it might be ensured that in respect of particular bridge when the total cost of the bridge etc. referred to above is likely to be recovered duly, the lease for the final lease year should indicate clearly that it shall come to a close as soon as the cost of the bridge etc are fully recovered.

4. I am to request that the action taken in the matter may kindly be intimated to this Ministry urgently.

No. RW/PL-8(5)/77

Dated the 24th Sept, 1981

To

All State Govts./U.Ts. (P.W.D. Depts. concerned with N.Hs.)

Subject : National Highways (Fees for the use of Permanent Bridges) Rules 1978

I am directed to refer to this Ministry's letter No. RW/PL-8(5)/77 dated the 22nd December 1980 on the subject noted above and to say that the Govt. of India have decided that no fees should be charged on the ROB's falling on the National Highways. Such bridges are therefore exempted from the levy of fees under the National Highways (Amendment) Act 1977 and rules framed thereunder.

No. RW/PL-8(5)/77

Dated the 23rd April 1982

To

The Secretary to the Govt. of (dealing with National Highways) — All States and Union Territories

Subject: Levy of fees on permanent bridges on National Highways costing more than Rs 25 lakhs, completed and opened to traffic on or after 1.4.1976

In continuation of this Ministry's letter No. PL-23(1)/77, dated the 18th December, 1978 on the subject mentioned above, I am directed to say that the National Highways (Fees for the use of permanent bridges) Rules, 1978 has have been amended vide this Ministry's Notification No. RW/PL-8(5)/77, dated 10th December, 1981 and published in the Gazette of India (Extraordinary) Part-II, Section 3, Sub-section (ii) dated the 5th January, 1982. A copy of the relevant notification is enclosed.

No. NHVI-50(3)/83

Dated the 7th June, 1983

To

All Secretaries of State PWDs,
All C.Es. of State/Union Territories dealing with N.Hs. and other Centrally sponsored roads

Subject: Advance action for construction of toll collection plazas for bridges on NHs costing more than Rs 25 lakhs completed and opened to traffic on/or after 1.4.76.

As per the Act of the Parliament of India communicated to all the State Governments vide this Ministry's letter No. PL-23(1)/77 dated 18.12.78, it is obligatory to collect toll tax at the prescribed rates for bridges on N.H. costing more than Rs 25 lakhs which have been completed and opened to traffic after 1.4.76.

2. It is being observed at present that action regarding construction of toll collection plazas is being initiated after the completion of the construction of the bridges. It is requested that a systematic planning may kindly be made and action in this regard initiated about 8 to 9 months prior to the likely date of completion of the bridge so that the estimates for the construction of toll collection plazas are got sanctioned and the plazas constructed by the time the bridges are completed. This would ensure that collection of toll is facilitated as soon as a bridge is completed and opened to traffic.

No. NHIII/P/23/84

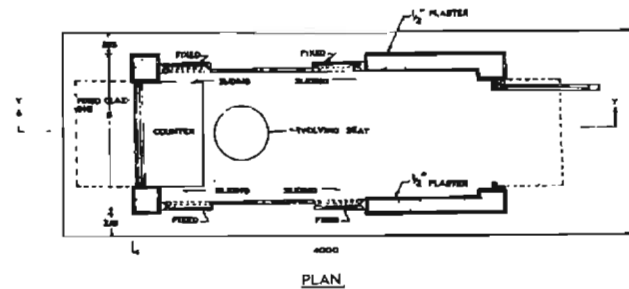
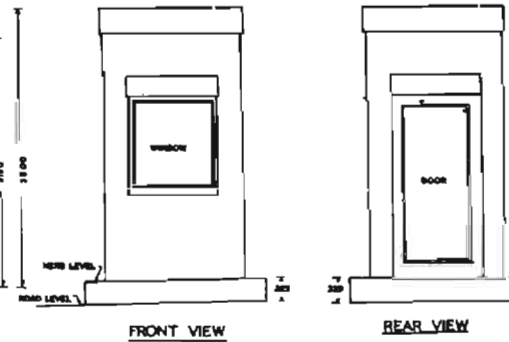
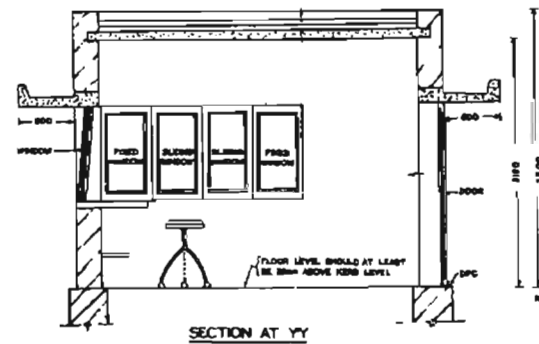
Dated the 26th July, 1984

To

Secretaries of all State Public Works Departments

Subject: Purchase of cars etc. from out of 'fee' money from permanent bridges on National Highways given to the State Public Works Departments for National Highway Development works

I am directed to say that a proposal has recently been received from a State P.W.D. that they may be permitted to purchase cars etc. from out of the money accruing from the fees levied on National Highway Bridges allotted by this Ministry to States for the development of National Highways in the States as an additionality over and above the normal Plan allocations of the States concerned for National Highways. Out of the money so allotted a sum equivalent to 12% is paid to States for collection charges where the fees are not being collected through Private Contractors and the balance of 88% is allotted for the development of National Highways. The State Governments will appreciate that if the money allotted for the development of National Highways to be utilised for item like purchase of cars etc. it will defeat the very purpose for which these fees are being levied to mobilise additional resources for augmenting the funds for the development of National Highways. The State Governments will appreciate that this is a very important aspect which needs to be kept in view while utilising the revenue from the fees on National Highway (Bridges). It has therefore been decided that the fee money meant for the development of National Highways should not be used for the purchase of cars etc. If the States so desire they may meet this requirement out of the money paid to them for collection charges.

DETAILS OF FEE COLLECTION BOOTH

4. FOR GENERAL LAYOUT OF PLAZA, SEE DWG. NO. 70, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 8

REVISIONS	FILE NO.	MINISTRY OF SHIPPING & TRANSPORT INDIAN MARITIME CORP. OF INDIA	
THIS DRAWING IS IN SUPPORT OF ORDER NO. 1704/14/2/77	PL-3777		
	BY: SET		
	DATE		
	THE	TYPE DESIGN FOR	
	NO.	FEE COLLECTION BOOTH	
	END		
BY: SET	DATE: 15-1-77	BY: M. S. SINGH	CONTROLLING NO.
BY: SET	DATE: 15-1-77	BY: M. S. SINGH	CONTROLLING NO.

No. PL-23(1)/77

Dated the 24th Sept., 1984

To

All the State Chief Engineers dealing with N.Hs.

Subject : Levy of Fees on permanent bridges — Drawings showing typical layout of Fee Collection Plaza and type design for Fee Collection Booths

Kindly refer to Ministry's letter of even number dated the 18th December 1978 on the above noted subject, forwarding therewith drawing Nos. STDS/R/A/1/78 and STDS/R/A/2/78 showing typical layout of Fee Collection Plaza and the type design for Fee Collection Booths respectively (para 7 of the said letter may please be referred to). These drawings were intended to serve as a **broad guide for adoption** on construction of Fee Collection facilities in respect of National Highway bridges.

2. Based on the experience gained and feed back from the field formations regarding performance of fee collection plaza constructed during the past few years, these drawings have now been reviewed and suitably modified. The salient modifications, as carried out, are :—

- i) The width of carriageway for fast and slow traffic lanes has been increased to 4 m and 5 m respectively;
- ii) The width of fee collection booths has been suitably increased;
- iii) Provision of roof-cover spanning across the booths has been dispensed with; and
- iv) Informatory signs for guiding the fast and slow traffic into respective traffic lanes have been incorporated.

3. Two sets of modified drawing Nos. TFC & TN/42 MARCH 84 and TFC & TN/43/MARCH 84 are enclosed for your reference and guidance for adoption on the envisaged Fee Collection facilities for National Highway bridges. It may be noted that these drawings are for a six lane fee collection plaza and may be suitably modified for a four lane plaza **as warranted by site and traffic considerations.**

Enclosures : Drawings referred to above.

160.15
121.2

No. PL-23(1)/77

Dated the 20th May, 1985.

To

All Technical Officers in the Ministry/DS (P & B)/US (P & B)/US (NH)/US (SR)
All Sections and Desks

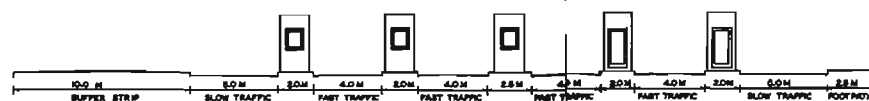
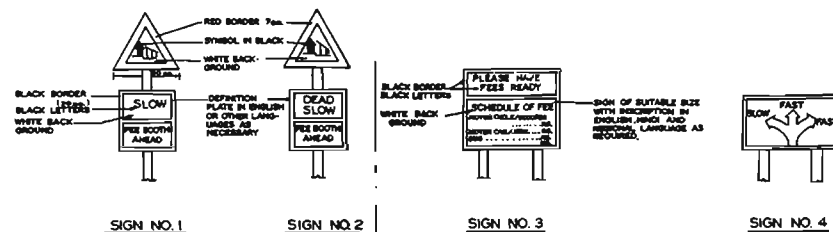
CIRCULAR

Subject : Provision of construction of Toll Plazas

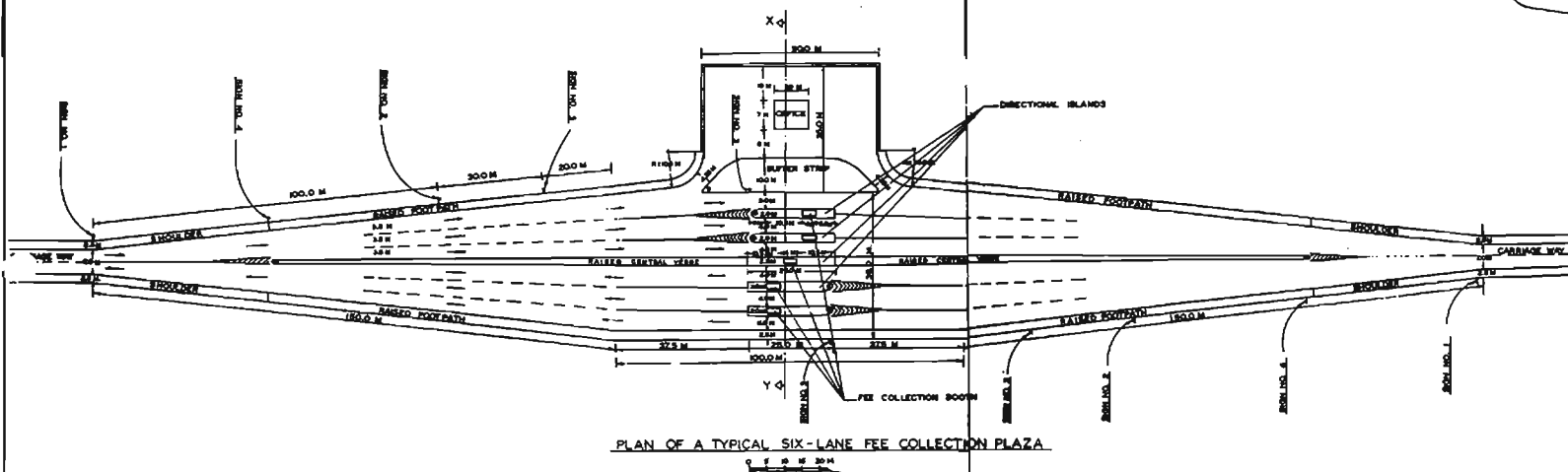
It has been observed that the estimates for construction of approaches to the bridges qualifying for levy of fee are being sanctioned without ensuring the provision for the construction of Toll Plazas. It has, therefore, been decided that in case a bridge qualifies for the levy of fee, approach estimates should not be sanctioned without the provision of toll plaza.

NOTES :-

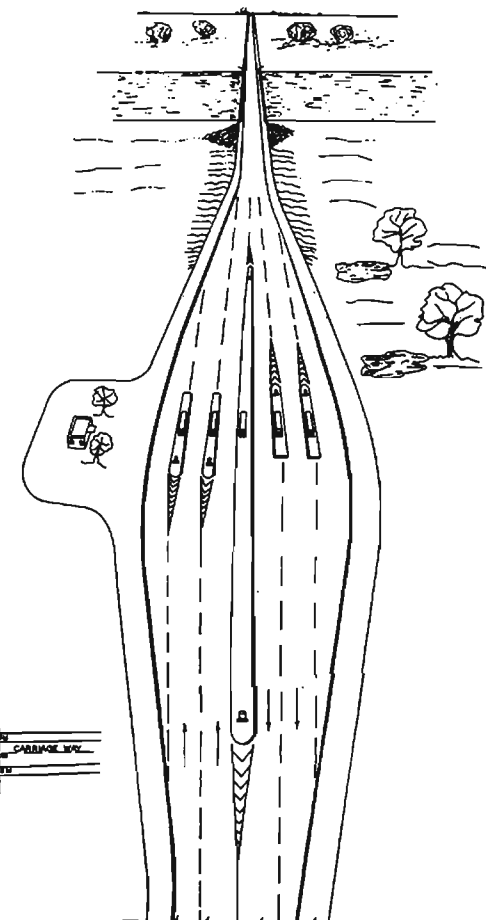
1. FOR DETAILS OF FEE COLLECTION BOOTHS. SEE DRAWING NO. TPA/TN/43/MARCH 84.
2. THE FEE COLLECTION PLAZA SHOULD BE LIMITED ADEQUATELY.
3. ADEQUATE ARRANGEMENT FOR DRAINAGE OF THE PLAZA AREA SHOULD BE MADE.
4. SHOW WHETHER PREFERABLY BE OF REFLECTORISED TYPE OTHERWISE, THESE SHOULD BE LIMITED ADEQUATELY
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS INDICATED ON THE DRAWING AND MAINTAINED PROPERLY. FOR DETAILED GUIDANCE SEE IRC STANDARD NO. 38-1970.
6. IN THE PLAZA AREA, THE SHOULDERS ON EITHER SIDE SHOULD BE RAISED TO FORM A RAMP AS SHOWN ON THE PLAN. THE JUNCTION BETWEEN SHOULDER AND FOOTPATH SHOULD BE SMOOTHLY TRANSITIONED BY A RAMP.
7. THE ENVIRONMENT OF THE FEE COLLECTION COMPLEX SHOULD BE SURROUNDED BY LANDSCAPE WITH PLANTING WITH FLOWERING PLANTS, DECIDUOUS, BUSHES, ETC.



CROSS SECTION AT XY



PLAN OF A TYPICAL SIX-LANE FEE COLLECTION PLAZA



BIRD'S EYE VIEW OF FEE
COLLECTION PLAZA
(NOT TO SCALE)

REVISIONS	FILE NO. P-231/77	MINISTRY OF SHIPPING & (ROADS WING) GOVT. OF INDIA
THIS DRAWING IS IN SUPERCHARGE OF DRG. NO. STDG/R/A/1/78	DATE CHNL TND, S&A CHQ	LAYOUT OF A TYPE FEE COLLECTION F
DESIGN. BY ENGR S.S.107/77	DRG. NO. S.S.107/77	DRG. NO. S.S.107/77

170 HIGHWAY ORGANISATION—INSTITUTIONAL INFRASTRUCTURE

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
170.1	Extracts from Road Development Plan for India (1981-2001)		170/1
170.2	OR/MSC/41/74 dt 22.7.77	Augmentation of Laboratory Facilities in the States for Material Testing/ Research	170/3
170.3	OR/MSC/41/74 dt 22.7.77	Augmentation of Laboratory Facilities in States for Material Testing/Research — Mobile Laboratory	170/3
<u>170.4</u> 609	OR/MSC/35/77 dt 20.12.77	Traffic Engineering Cells in the State PWDs	170/4
170.5	OR/MSC/18/79-OR dt 10.4.80	Augmentation of Laboratory Facilities in States for Material Testing/ Research — Addl. equipment to State Laboratories which had already reached the level of the CRRl Model	170/5
170.6	OR/MSC/18/79 OR dt 10.4.80	Provision of Laboratory Facilities to States for material testing — Provision of Regional laboratories/sub-centres	170/8
<u>170.7</u> 6200, 3100	CRF/IRC/18 dt 26.2.81	Setting up of Research Development & Quality Promotion Cells in States	170/8
<u>170.8</u> 3100	RW/NHIII/Coord/33/84. dt 5.5.84	Recommendations of the Vohra Committee — Setting up of Traffic Engineering Cell, R&D, Monitoring & Material Management Cells in States.	170/10
<u>170.9</u> 3100	NH-III/P/1/83 dt 28.5.85	Quality Control on National Highways— Staffing Pattern for Testing Laboratories	170/11

EXTRACTS FROM ROAD DEVELOPMENT PLAN FOR INDIA (1981-2001)

ORGANISATIONAL MATTERS

36.1 Introduction

Since the size of the Road Plan is very large, there will be a sizable increase in activities both at the Centre and at the States. This obviously calls for a large measure of augmentation of the organisational set-up. Apart from strengthening the structure, there is a need to reassess its functions and activities with a view to obtaining the most cost-effective solutions.

36.2 Need for Separate Highway Organisations

36.2.1. Since road development will constitute as an important sector of activities in the State PWDs and considering large outlay in each state, the need for separate organisation to deal with roads is obvious. Many states in the country have already set up highway departments. Those who do not have, should plan to have them soon.

36.2.2. Since the quantum of Central sector works in each state will also be substantial, there is a need for a separate organisation in each state to deal with Central sector schemes. Already some of the State PWDs have this arrangement and the Ministry of Shipping & Transport have been emphasising the necessity for setting up such organisations in all the states. A time has come when this requirement cannot be postponed any further.

36.2.3. It is in the matter of the organisational structure to deal with rural roads that a complete re-thinking is absolutely necessary. At present, construction of rural roads is being handled by a multiplicity of organisations such as the PWDs, Rural Engineering Organisations, Panchayat Raj, Village Samities, Revenue Authorities, etc. This diversification of activities has resulted in unplanned construction and neglected maintenance. It is unavoidable to bring under one banner the whole gamut of activities dealing with rural roads, planning and construction. It is suggested that a Rural Engineering Organisation should be established in each state to deal with all types of rural roads construction, be they are financed from Minimum Needs Programme, Employment Guarantee Scheme, or Tribal Welfare Schemes, etc.

36.3. Functions

The organisational structure of the Highway Department itself needs to be re-examined in view of the growing needs. It has been the realisation of the Roads Wing that in many cases, projects are not adequately investigated, with the result that the designs are faulty, and time over-runs and cost over-runs take place. This emphasises the necessity for creating adequate organisational support for investigation and design of projects. Close monitoring of the progress of works will help to identify the bottlenecks in time and take corrective measures. A Monitoring Cell should, therefore, form an important adjunct of the Public Works Department. Research and Development is catching up very fast and in the Road Plan, a substantial provision has been made both under the Central Sector and the State Sector for research schemes. This can be implemented only if there is a separate cell dealing with Research and Development in the highway department of each state. The Ministry of Shipping & Transport have been emphasising the need to set up separate Traffic Engineering cells in the various PWDs in view of the growing importance of traffic engineering measures to improve the safety, comfort and convenience of road transport. Those states which have not established such cells, should do so immediately. Adequate maintenance of assets can be closely watched and implemented if there is a good inventory system. The highway department should have a cell to deal with this important aspect. Quality control of road and bridge works ensures that a minimum standard of road construction is achieved in the field. For this purpose, the highway department should have separate staff with adequate laboratory facilities.

Land acquisition often poses difficulties and causes delay in the construction of roads. In order to simplify the procedure, it is necessary to have a land acquisition officer and necessary complementary staff in the Chief Engineer's organisation itself, rather than depending upon the revenue department. These land acquisition officers will have to be borrowed from the revenue department. The proposed set-up will also help to update records of highway land, which are at present lacking. Such records prevent encroachment.

36.4. Model Set-up

Considering the above needs, a model set-up for a Highway Department dealing with National Highway works or State Highway works has been prepared and is given in Annexure 36.1. This set-up is capable of executing original works of the order of Rs 50 crores per annum. If maintenance works are also considered, the value of maintenance works can be doubled in arriving at the work load. It is suggested that the model highway set-up should be adopted by the various Public Works Departments. The work load of a Division can be in the range of Rs 100 lakhs to Rs 150 lakhs per annum.

It is necessary to have one or more Engineer-in-Chief-cum-Secretaries in states, in overall charge of the Public Works Departments. The various Chief Engineers in the set-up will be reporting to the Engineer-in-Chief-cum-Secretary.

It is desirable to have under the Engineer-in-Chief, a separate Chief Engineer each for

- (i) Research, Design and Project Preparation
- (ii) Planning, Traffic and Monitoring
- (iii) Execution of National Highway Works and Maintenance
- (iv) Execution of State Road works including Maintenance
- (v) Rural Roads.

36.5. It has been noticed of late that the right type of talented engineers are not attracted to the highway engineering profession. This sorry state of affairs will have serious repercussions on the quality of road design and construction in the future. It is, therefore, of prime importance that incentives be given to fresh entrants. There are many institutions now in the country offering postgraduate courses in highway engineering, traffic engineering and structural engineering. Candidates possessing such post-graduate qualifications should be offered higher scales of pay and assigned jobs which will satisfy their intellectual curiosities. They can be used in specialised cells such as traffic engineering cells, research & development cells, planning & designs cells. Additional remuneration should be offered to them for the specialised work. It is also necessary to send graduate engineers on a selective basis for acquiring postgraduate qualifications.

36.6. Modernisation

The highway engineering profession is on the threshold of complete modernisation in its outlook. Computers will be used progressively on a large scale both for designing highway and structures and also for economic evaluation and management information system. The vast amount of data which the highway engineer has to collect, store, retrieve and analyse can only be handled by a modern fast computer. It is necessary that each Highway Department should procure micro-processors and plan their activities on scientific lines. Computer-aided designs and monitoring system should be adopted progressively.

36.7. Consultancy Services

Highway engineering investigations and designs in the country so far have been handled departmentally. But a time has come when these activities can be better handled through the services of specialised consulting engineering firms. This is the trend in all countries abroad and cannot therefore, escape the Highway Departments in India for long. Newer concepts in Planning and Design call for specialised skills and they are readily available with consultancy organisations. The Highway Department should not feel shy of referring their problems to such firms. In this process, the consultancy services in India will be gradually built up and will not only take care of indigenous requirements but also can compete for works abroad.

Consultancy organisations under the Central and State Governments can also perform satisfactorily and may be set up to take up special jobs.

Specialised areas such as development of network in a region, urban transport planning, preparation of projects for Expressways and divided carriageways, preparation of important bridge projects, economic appraisal, formulation of road safety schemes, environmental improvement schemes etc., should be entrusted to consultancy organisations.

36.8. Organisational set-up for Rural Roads at the Centre

The Central Government will have to play an important role in the planning, coordination and funding of Rural Roads in the country in the period 1981-2001. The target of achieving full connectivity to all

villages by the year 2001 entails a stupendous task, which calls for a great degree of central planning, coordination, funding and monitoring. At present, the Ministry of Rural Development perform this role. In consultation with the Planning Commission and the States, this Ministry closely monitor the Rural Road programme under the Minimum Needs Programme and they also approve Rural Road programmes under RLGP, NREP and IRDP. While there is no doubt that this Ministry is the right authority for dealing with the large scale Rural Road programme envisaged in the present Plan, it should be ensured that the engineering and managerial capabilities in this Ministry are developed to shoulder the huge task. It is only then that the Centre can ensure that Master Plans are prepared at the District Level in each state optimising the network and providing connectivity as per targets laid down, that the road construction programme is based on proper selection of geometric standards and construction specifications, that the actual execution of the works at the State level is carried out with due regard to quality control and economy and that the flow of funds is assured. The Central Organisation should have an inspectorate to visit the various states and examine the quality of works.

170.2

No. OR/MS/41/74

Dated the 22nd July, 1977

To

The Chief Engineers,
Public Works Department (dealing with roads), in the States of Goa, Jammu & Kashmir, Manipur, Meghalaya, Nagaland, Sikkim and Tripura

Subject : Augmentation of Laboratory Facilities in the States for material testing/Research

In continuation of this Ministry's circular letter of even number dated the 19th August 1976 on the subject mentioned above I am directed to say that it has been decided to provide grant-in-aid from the CRF (Ord.) Reserve on a matching basis for bringing up the laboratories in the above States to the Standard of the CRR Model or the standard of the Testing and control Laboratories as envisaged in the IRC, quality control manual at a total cost of upto Rs 5.00 lacs i.e. roughly Rs 2.25 lacs for equipment and Rs 2.75 lacs for building, furniture and library etc. Since the grant from the CRF (Ordinary) Reserve is to be made on matching basis, the balance 50% cost of the schemes amounting to Rs 2.50 lacs will have to be met by the State Govts. concerned from their own resources but excluding their free balance in the Central Road Fund (Allocations) Account. I am, therefore, to request that the State Govt. may be asked to forward the required estimate in this regard alongwith their concurrence to meet 50% of the cost of the laboratory from their own resources with a view to enable this Ministry to process the case further.

170.3

No. OR/MS/41/74

Dated the 22nd July, 1977

To

Chief Engineers,
Public Works Department,
(dealing with roads) in the States of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Karnataka, Orissa, Punjab, Rajasthan, Tamilnadu, Uttar Pradesh, West Bengal, Jammu & Kashmir, Manipur, Goa, Tripura and Arunachal Pradesh.

Subject : Augmentation of Laboratory facilities in States for material testing/research — Mobile laboratory

In continuation of this Ministry's circular letter of even number dated the 19th August 1976 on the subject mentioned above I am directed to say that it has been decided to provide grant-in-aid from the CRF (Ord.) Reserve on matching basis for Mobile Laboratories in different States at a total cost of upto Rs 2.30 lakhs per State (roughly Rs 1.80 lakhs for Laboratory truck and Rs 0.50 lakhs for equipment). Since the grant from the CRF (Ord.) Reserve would be restricted to 50% of the total cost, the balance 50% will have to be met by the State Government from their own resources but excluding their free balance in the CRF (A) Account. I am, therefore, to request that the State Govt. may be asked to forward the required estimate in this regard alongwith their concurrence to meet the 50% of the cost of the Mobile Laboratories from their own resources with a view to enable this Ministry to process the case further.

No. OR/MSD/35/77

Dated the 20th December, 1977

To

All State Governments and Union Territories regarding need for Traffic Engineering Cells in the State P.W.Ds.

I am directed to invite a reference to this Ministry's letter No. PL-50(19)/73 dated the 24th June, 1974 and D.O. letter of even number dated the 18th June, 1976 from the Director General (Road Development) and Additional Secretary in this Ministry to the State Public Works Department Secretaries and Chief Engineers stressing the need and urgency for the creation of Traffic Engineering Cells in the State P.W.Ds. As explained in these letters, this matter had also been discussed at a number of forums in the past including the meeting of the Chief Engineers and the need for establishing traffic engineering cells had been appreciated by all concerned. However, it appears that not much headway has been made by the States as far in the actual setting up of these cells due to financial limitations and actually it is not known how many states have already set up such cells and how many have yet to set up the required organisations.

2. Meanwhile the objectives of the Central Road Fund has also been revised which provide now *inter-alia* for traffic studies also and this Ministry feel that the State Governments could easily meet the expenditure involved in the creation of the required traffic engineering cells from the Central Road Fund Allocations Account in the light of the revised objectives of the modified Resolution already sent to the States recently. I am, therefore, to request you kindly re-examine the question of setting up of the required traffic engineering cells and to formulate suitable proposal for setting up these cells from States' Central Road Fund Allocations Account wherever these cells have not been set up so far. The Government of India on their behalf would be prepared to give their fullest consideration to such proposals as and when they are received. It will, therefore, be greatly appreciated if the matter is reviewed in the light of this position and action taken is intimated to this Ministry. While doing so, the position of cells, if any, already set up may also kindly be indicated with upto date set up, its function and the progress made by it so far. An early reply is requested.

Rough Cost Estimate for setting up Traffic Engineering Cells in List I States*

Item	Nos.	Actual Cost Rs	5 years cost Rs
A			
1. Superintending Engineer	1	23,400	
2. Executive Engineer	2	39,600	
3. Asst. Executive Engineer	2	30,000	
4. Statistician-cum-Economist/Investigators	2	31,200	**
5. Traffic Enumerators	12	57,600	
		1,81,800	9,09,000
Say Rs 9 lakhs.			
B Secretariat and other Supporting staff.	L.S.		2,10,000
C Contingent expenditure like TA, DA, Office Rent, Books, Journals, Printing of Forms reports etc.	L.S.		90,000
D Office Equipment, Jeeps, Typewriters, telephone etc.	L.S.		75,000
E Traffic Equipment like automatic counters, Callipers, stop watches, camera, driver and pavement surface testing equipment, fluorometer etc.	L.S.		2,25,000
	TOTAL		15,00,000
		Say Rs 15 lakhs	

* List I includes States having total surfaced roads more than 15,000 kms or Motor Vehicles populations of more than 50,000. States included are Andhra Pradesh, Assam, Bihar, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal and Delhi.

** The Staff should be given some special pay to attract qualified personal having the right aptitude.

Rough cost Estimate for setting up Traffic Engineering Cells in list II States*

Item	Nos.	Annual cost Rs	5 year cost Rs
A. 1. Executive Engineer	1	19,800/	
2. Asst. Ex. Engineer	2	30,000/	
3. Statistician-cum-Economists/Investigators	2	31,200/	
4. Traffic Enumerators	8	38,400/	
		1,19,400/	5,97,000/
Say Rs. 6 lakhs			
B. Secretariat & other supported Staff.	L.S.		1,30,000/
C. Contingent Expenditure like TA, DA, Office rent, books, printing etc.	L.S.		1,00,000
D. Office Equipment	L.S.		50,000/
E. Traffic equipment like automatic counter, Calculators, Camera, Stop watches, driver and pavement surface testing equipment, fluxometer etc.	L.S.		1,20,000/
	TOTAL		10,00,000/
Say Rs 10 lakhs.			

* List II States includes States having total surfaced roads less than 15,000 km. and Motor Vehicles population of less than 50,000. States included are Arunachal Pradesh, Haryana, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tripura, Chandigarh and Goa.

** The staff should be given some special pay to attract qualified personal having the right aptitude.

170.5.

No.OR/MSO/18/79-OR

Dated the 10th April, 1980

To

The Secy. to the Govt. of Andhra Pradesh Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Karnataka, Orissa, Punjab, Rajasthan, Tamilnadu, Uttar Pradesh and West Bengal.

Subject: Augmentation of laboratory facilities in States for material testing/Research — Additional equipment to State labs. which had already reached the level of the CRRI model

I am directed to say that with a view to augment the existing laboratory facilities in States for material testing/Research, the Govt. of India have decided to offer a grant-in-aid equal to Rs 4 lacs, on matching basis, from the Central Road Fund (Ordinary) Reserve for acquiring additional equipment at a cost of Rs 8 lacs for State laboratories which have already reached the level of the Central Road Research Institute model. Since this proposal is likely to cost Rs 8 lacs and the grant-in-aid from the Central Road Fund (Ordinary) Reserve would be restricted to 50% of the total cost, the balance 50% will have to be met by the State Government from their own plan resources but excluding their free balance in the Central Road Fund (Allocations) account. The State Govt's confirmation of the acceptance of this position may please be communicated urgently.

2. A copy of the list indicating the additional equipment required for augmentation of laboratory facilities is enclosed (Annexure I). The total cost of this global list of equipment works out to Rs 15 lacs. While some of the equipment (Marked by asterisk in Annexure I) may not be required by all the States, some other equipment might be already available with many other State Govts. Taking into account this factor, it is estimated that on the average the cost of additional equipment would be about Rs 5.2 lacs. In addition, a provision has been made for buildings to accommodate the additional equipment at the cost of Rs 2.80 lacs. The total cost of the proposal is accordingly estimated at Rs 8 lacs. I am therefore, to request that the State Govt. may kindly consider the proposal of augmentation of laboratory facilities referred to above and forward a detailed estimate for the approval of this Ministry. While forwarding this estimate, formal concurrence of the State Govt. to meet the balance 50% cost from their own plan resources may also be forwarded to this Ministry.

CONSOLIDATED LIST OF ADDITIONAL EQUIPMENT TO BE PROVIDED IN THE STATE LABORATORIES

Sl.No.	Equipment	No. Reqd.	Approx. Rate	Amount
1	2	3	4	5
1. A	General Equipment.			
(i)	High sensitivity proving ring 100 kg - Capacity	2	1900	3800
(ii)	200 kg - Capacity	2	1900	3800
(iii)	500 kg - Capacity	2	1900	3800
(iv)	1000 kg - Capacity	1	1900	1900
(v)	2000 kg - Capacity	1	2600	2600
2	Dial Gauges			
(i)	12 mm Travel	6	500	3000
(ii)	25 mm Travel	6	500	3000
	Sub-Total : A			21900
1. B	Sub-Surface Investigations			
	Truck	1	1,30,000	1,30,000
	Drilling Rig, upto 60 m depth	1	1,00,000	1,00,000
	Soil & rock drilling kit	1	52,000	52,000
	Vane Shear kit	3	17,000	51,000
	Portable equipment for seismic survey (TERRASOOUT)	1	23,000	23,000
	Stratometer for electrical resistivity survey	1	13,000	13,000
	Borehole Camera	1	20,000	20,000
	Binosular type micro scope	1	10,000	10,000
	Borehole deformation meter	1	30,000	30,000
	Static penetrometer equipment (10 tonnes)	1	50,000	50,000
	Hydraulic Jacks. (30, 50, 100 and 200 tonnes).	1	27,000	27,000
	Undisturbed soil samplers (Denson & Piston Sampler)	1	18,000	18,000
	Plate load test equipment	1	10,000	10,000
	Thin wall sampling tubes (100 & 50 mm. Dia. and 0.75 m long)	100 each type.	—	20,000
	SPT Test equipment and static cone penetrometers.	3	5,000	15,000
	Sub-Total : B			5,69,000
	* Optional items depending on the requirements.			
C.	Soils			
1.	Sample extractor frame with hydraulic jack hand operated	1	1,100	1,100
2.	Motorised unconfined compression testing machine	1	1,800	1,800
3.	Motorised direct shear operators with 12 rate of strain	1	10,000	10,000
4.	Triaxial testing equipment (Motorised) with 8 rates of feed and Assembly for lateral-pressure and pore pressure	1	35,000	35,000
5.	Tor Vans Apparatus	3	900	2,700
6.	Universal Automatic Compactor	1	5,000	5,000
7.	Core cutter	6	700	42,000
8.	Soil Lathe	1	5,000	5,000
9.	Vacuum pump	1	7,500	7,500
10.	Proctor needle, spring type	6	500	3,000
*11.	Consolidation test equipment	3	9,000	27,000
	Sub-Total : C.			1,02,800
D.	Rock Testing Equipment			
1.	Rock Sample height Gauge	1	600	600
2.	Rock Classification Hammer	1	1,250	1,250
3.	Portable rock tester	1	12,000	12,000
*4.	Field direct shear kit	1	35,000	35,000
	Sub-Total : D			48,850

E.	Concrete :			
*1.	Concrete laboratory set up.	1	38,000	38,000
2.	In-situ concrete strength testing equipment, test hammer & Pachometer	1	22,000	22,000
*3.	UTM for tension, compression and other tests	1	40,000	40,000
*4.	Strain measuring equipment set	1	20,000	20,000
			Sub-Total : E	1,20,000
F	Equipment for Hydraulic Studies			
1.	Current meter	1	5,000	5,000
2.	Echo sounding equipment	1	10,000	10,000
			Sub-Total : F	15,000
G.	Road Testing Equipment			
1.	Benkelmen Beam.	2	2,000	4,000
2.	Profile meter (hand towed)	2	5,000	10,000
*3.	British portable skid tester	4	15,000	60,000
*4.	Accelerated polishing machine	1	20,000	20,000
			Sub-Total : G	94,000
H.	Traffic Engineering			
*1.	Radar Speed meter	1	20,000	20,000
2.	Enoscope	1	1,000	1,000
*3.	Electronic Traffic counter	1	15,000	15,000
4.	Multi-bank hand tallies	6	200	1,200
*5.	Multi-pen event recorder	1	5,000	5,000
*6.	Time lapse photography camera and projector unit	1	20,000	20,000
			Sub-Total : H	62,200
J	Terrain Evaluation and Photogrametry			
*1.	Pocket stereoscope	2	2,000	4,000
*2.	Stereometer with Parallax Bar	1	20,000	20,000
			Sub-Total : J	24,000
K.	Mobile Laboratory			
*1.	Laboratory Truck		1,80,000	1,80,000
*2.	Equipment		50,000	50,000
			Sub-Total : K	2,30,000
L.	Special Research Equipment			
*1.	Equipment. (individual items should be identified depending on actual needs)	1	1,00,000	1,00,000
			Sub-Total : L	1,00,000
M.	Quality Control Equipment in Field.			
*1.	Equipment (individual items to be identified depending on actual needs)	1	50,000	50,000
			Sub-Total : M	50,000
N.	Miscellaneous			
1.	Electronic Desk Calculator	1	5,000	5,000
*2.	Slide Projector	1	5,000	5,000
*3.	Camera	1	4,000	4,000
*4.	Photostat Machine	1	5,000	5,000
			Sub-Total : N	19,000

No. OR/MSD/18/79-OR

Dated the 10th April, 1980

To

The Secy. to the Govt. of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Karnataka, Orissa, Punjab, Rajasthan, Tamilnadu, Uttar Pradesh, West Bengal & Jammu & Kashmir.

Subject: Augmentation of laboratory facilities to states for material testing/Research — provision of Regional labs/sub-centres

I am directed to state that with a view to augment the existing laboratory facilities in States for material testing/research, the Govt. of India have decided to offer a grant-in-aid equal to Rs 2.25 lakhs on matching basis, from the Central Road Fund (Ordinary) Reserve for regional labs/sub-centres. These laboratories are envisaged to be to the standard of Testing and Control Laboratory recommended in the Quality Control Handbook of the Indian Roads Congress. The broad break-up of the cost is as under :

i)	General Equipment		Rs 63,900
ii)	Soil Testing Equipment		Rs 26,000
iii)	Bitumen Testing Equipment		Rs 28,000
iv)	Concrete and Material Testing Equipment		Rs 39,800
v)	Control of profile and unevenness		Rs 8,700
			Total :
Contingencies @ 3%			Rs 1,66,400
			Rs 5,000
			Rs 1,71,400
Library			Rs 30,000
Accommodation :			
a)	Laboratory	300 sq. mts.	
b)	Office	100 sq. mts.	
c)	Library	50 sq. mts.	
Total : 450 sq. mts.			
450 sq. mts. at the rate of Rs 500 per sq. mts.			Rs 2,25,000
Furniture Lump-sum			Rs 25,000
			Total :
			Rs. 2,50,000
Grand Total :- Rs 4,51,400 or say Rs 4.50 lakhs			

2. Since the grant from the Central Road Fund (Ordinary) Reserve would be restricted to 50% of the total cost, the balance 50% will have to be met by the State Govt. from their own resources but excluding their free balance in the Central Road Fund (Allocations) account. I am, therefore, to request that the State Govts. may be asked to forward the required estimate in this regard. While forwarding the estimate the concurrence of the State Government to meet 50% of the cost of regional labs/sub-centres from their own plan resources may also be forwarded to this Ministry.

170.7.
3100
6200

No. CRF/IRC/18

Dated the 26th February, 1981

To

All State Governments and Administrations of Union Territories, (Departments dealing with Roads)

Subject:- Setting up of a Research-Development and quality Promotion Cell at the headquarters Office of the Chief Engineer in each State out of the Central Road Fund (Allocations) Account

In pursuance of the recommendations of the Council of the Indian Roads Congress made by them in their 91st Meeting held in Calcutta on the 18th December, 1977 and Chief Engineers' Meeting held at Jaipur on 7th February, 1980 it has since been decided to agree to the entire Expenditure on in establishment of Research, Development and Quality Promotion Cells in the States being met out of the State's Central Road Fund (Allocations) Account for a period of 5 years to begin with. According to this Ministry's assessment a sum to the extent of Rs 10.00 lakhs/Rs 5.00 lakhs, will be required for meeting the initial and recurring expenditure for five years as per details enclosed.

2. The objective of this cell is to create necessary organisational infra structure at the State level for (i) **administration, Planning and programming Research and development activities**, (ii) **promotion of domestic technology** (iii) **dissemination of results of the Research and Development activities by updating specifications and standards and preparation of manuals/guidelines for the use of construction staff**, and (iv) **effecting qualitative improvements in project preparation and execution including quality control and interaction with the teaching institutions and other research organisation for mutual benefit**.

3. A note indicating objectives, function and organisational set-up of the cell and rough estimate etc. of the cost involved is attached. I am to request that the question of setting up of a Research Development and Quality Promotion Cells may kindly be examined in the light of above details and a suitable proposal for setting up these cells against State's Central Road Fund (Allocations) Account forwarded to this Ministry.

ESTABLISHMENT OF RESEARCH DEVELOPMENT AND QUALITY PROMOTION CELLS IN THE STATE

1. OBJECTIVE :

The objective is to create necessary organisational structure at the State level for administering **Planning and programming Research and Development activities**, **promotion of domestic technology**, dissemination of results of the Research and Development activities by up-dating specifications and standards, and preparation of manuals/guidelines for the use of construction staff; effecting qualitative improvements in project preparation and execution including quality control and interaction with the teaching institutions and other research organisations for mutual benefit.

2. IMPORTANCE OF THE CELLS :

Bulk of highway construction is done by the State Public Works Departments. At the moment because of the communication gap between research, operational and teaching sides, it has become rather difficult to introduce in a systematic way new ideas in design and construction and make use of the best available talents. Even where the ideas are implemented through persistent efforts, subsequently there is very little feedback of information for the refinement of technology. Even where there is some feedback of information, there is no system or mechanism for adaptation in actual works or dissemination among the field engineers.

The proposed Cell, besides administering Research and Development activities at the State level will go a long way in building up the needed awareness for improved quality and making the operational staff more responsive to new techniques. Direct benefit accruing from the scheme would be of better quality in respect of both project preparation and execution of highway works.

3. FUNCTIONS :

The Research and Development Cell will have the following functions :-

- (i) Administering Research and Development budget pertaining to the State Sector plan provisions;
- (ii) Organising Research and Development work at the State level including coordination and monitoring of Central sector Research and Development schemes assigned to the State;
- (iii) Tending advice to the State Chief Engineer on the actual application of latest techniques and research findings, and matter concerning in — service training of engineers;
- (iv) Introducing of new ideas towards achieving well prepared projects, and their execution to higher standards of quality;
- (v) Compiling and up-dating requisite technical manuals, technical literature, guidelines etc. for the use of field engineers;
- (vi) Participating in the cooperative research programme and demonstration projects;
- (vii) Inter-action with the teaching institutions for better cooperation and coordination between such institutions and the State Public Works Department for mutual benefit in the matters of research, research application and training of engineers;
- (viii) Keeping liaison with the H.R.B. the R & D Cell at the centre and other research laboratories in the country;
- (ix) Dissemination research findings among field staff and arranging for workshops, seminars etc. on important technical matters.

4. ORGANISATIONAL SET - UP OF THE CELL :

4.1 The day-to-day work of the Cell in each State will be looked by a Staff Cell having the following composition depending on the size of the State :

- (i) For Major States :
Headed by an officer of Superintending Engineer grade **assisted** by three Executive Engineers and other supporting staff.

(ii) For Smaller States and Union Territories :

Headed by an officer of Executive Engineer grade and assisted by two Assistant Executive Engineers and other supporting staff.

Rough cost estimate of these set-ups are given in para 5.

4.2. Guidance to the staff Cell in each State will be provided by an Advisory Panel Constituted for the purpose and having the following composition :

(i) Chief Engineer (dealing with Roads)	Chairman
(ii) Director State Highway Research Laboratory	Member
(iii) Director Designs, State Public Works Deptt.	Member
(iv) A Member nominated by H.R.B.	Member
(v) A Member nominated by Roads Wing	Member
(vi) A Member from teaching Institution	Member
(vii) Head of the Staff Cell	Member Secretary

5. Rough cost estimate for setting up Research and Development Cells in States :

5.1. For larger States :

Item	Nos.	Annual cost (Rupees)
A. Technical Staff :		
(i) Superintending Engineer	1	30,000/
(ii) Executive Engineer	3	66,000/
(iii) Assistant Executive Engineer.	3	48,000/
Total :		1,44,000/
B. Sub - head		
C. Secretarial and other supporting staff:		L.S. 32,000/
TA/DA, Office equipment, Stationery and contingencies		L.S. 25,000/
Total :		2,01,000/

Say Rs 2.00 lakhs per year
or Rs. 10.00 lakhs for 5 years

5.2. For smaller States and Union Territories :

Item	Nos.	Annual cost (Rupees)
A. Technical Staff :		
(i) Executive Engineer	1	22,000/
(ii) Asstt. Executive Engineer	2	32,000/
Total :		54,000/
B. Secretarial and other Supporting Staff :		L.S. 25,000/
C. TA/DA, office equipment stationery and contingencies		L.S. 20,000/
Total :		99,000/

Say Rs 1.00 lakhs per year
or Rs 5.00 lakhs for 5 years.

170.8
3100

No. RW/NH.III/COORD/33/84

Dated the 5th May, 1984

To

The Secretaries of all States
(Department dealing with Roads)

Subject :- Recommendations of the Vohra Committee — Setting up of Traffic Engineering Cell, R&D, Monitoring, Material Management and Quality Control Cells in States

I am directed to say that the Committee, set up by the Government of India sometime ago for reviewing and making recommendations for better performance of the Agency System for National Highways has,

inter alia, recommended as under :-

"Those States which have not set up exclusive Organisation for National Highways works, Cells at the Headquarters of the Chief Engineers for dealing with matters relating to monitoring, material management, R&D, Traffic Engineering, Quality Control etc. should fall in line without further delay."

2. As the State Government are aware, this Ministry have already been pursuing with the States to set up the following specialised Cells at the headquarters of the State Chief Engineers.

- (i) Traffic Engineering Cell;
- (ii) R&D and Quality Promotion Cell;
- (iii) Monitoring and Material Management Cells;

Copies of relevant letters are enclosed for ready reference.

3. Some States have already set up such Cells either from the Central Road Fund Allocations Account or State resources. I am, however, now to request you again to examine the entire question of setting up all such cells keeping in view the recommendations of the committee and take necessary action to set up these Cells either out of Central Road Fund (Allocations) Account, in case sufficient free balances is available to them to meet the cost involved or out of their own Plan resources as early as possible. Action taken or proposed to be taken in the implementation of this recommendation may be intimated to this Ministry in due course.

170.9.
3100

No. NHII/P/1/83.

Dated the 28th May, 1985

To

The Director General (Works), Central Public Works Department, Director General, Border Roads,

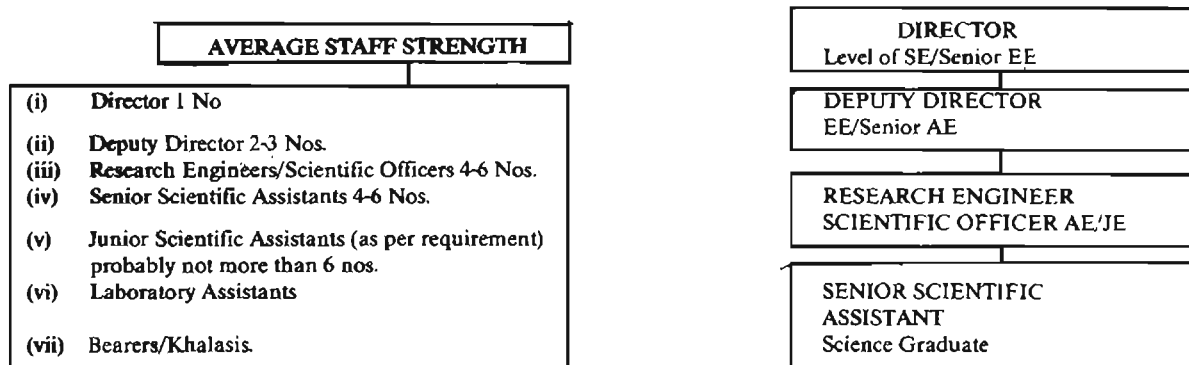
All State/Union Territories Administration Chief Engineer dealing with National Highways and Centrally sponsored Schemes

Subject:- Quality Control on National Highways and other Centrally sponsored Schemes — Staffing pattern for testing laboratories

In this Ministry's letter of even number dated 19th April 1984 detailed requirements regarding quality control measures and laboratories were brought out for adoption by the departments. Some of the Chief Engineers have suggested the details of the staff pattern for different level quality control laboratories. To maintain uniformity of the staff, a broad staffing pattern has been given in respect of the Central, Regional and Field Laboratories in the enclosed annexure. The pattern suggested is merely indicative and changes may be made keeping in view actual requirements in the department.

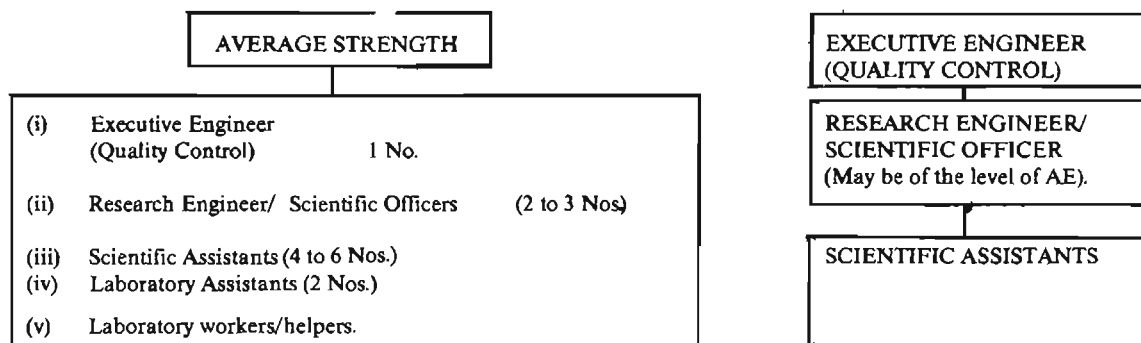
Annexure I

STAFF PATTERN FOR CENTRAL LABORATORIES
(Based on C.R.R.I's Model)



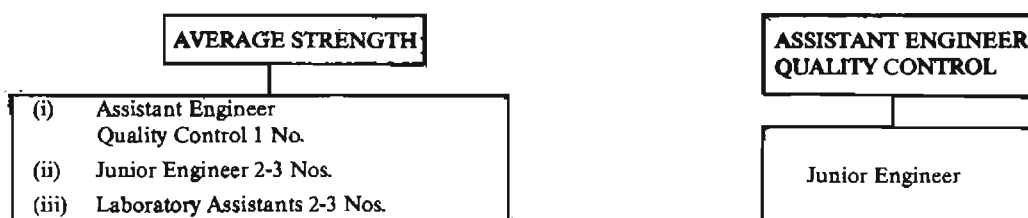
- Notes :**
- The above said staff pattern is only indicative and may be modified for any warranted stage development and even enhanced depending upon actual work load.
 - The above said key staff may be supported by a librarian, draftsman, tracers, mechanics and drivers. There may be also appropriate staff and watch and ward staff.

STAFF PATTERN FOR REGIONAL LABORATORIES



- Notes :
1. Regional Laboratory will be dealing with specific cases, policy matters and training of staff etc. under overall guidance from the Central Laboratory.
 2. The above said staff may be modified for any warranted stage development and even may be enhanced depending upon actual work load.
 3. The above said key staff pattern is only indicative and may be supported by draftsman and drivers. There may also be appropriate watch and ward staff.

STAFF PATTERN FOR FIELD LABORATORY



- Note :
1. Depending upon the job the Field Laboratory will deal with the routine field tests at the site of the project work.

180 **ALLOCATION OF CEMENT & OTHER MATERIALS**

<i>Code No</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
180.1.	RM-29 (1)/74-Pt. dt. 16/20.4.74	Release/Requirement of Cement	180/1
180.2.	NHVI-50 (20)/77 dt. 15.12.77	Acceptance Tests on Cement	180/2
180.3.	RM-29 (2)/80 dt. 20.8.82	Allocation and Movement of Cement	180/2
180.4.	RW/RMP-29(5)/83 dt. 9.8.83	D.G.S. & D Rate Contract for Supply of Cement	180/3
180.5.	CC/CO/20 (I-A)/84/4342 dt. 21.5.84	Release of OPC Cement	180/5

No. RM-29 (1) 74-Pt.

Dated the 16th/20th April 1974

To

The Secretaries of All State Govts. & Union
Territories (dealing with Roads)

Subject: Release/requirement of cement for National Highways and other centrally sponsored road works

I am directed to inform you that on the basis of the bulk allocation received from Cement Controller a quantity of _____ tonnes of cement has been earmarked for your state/U.T. for the quarter II/74, for construction of Bridge and culvert on National Highways and other centrally sponsored Road works.

Consignee particulars, such as :

- (i) Name and Address of Indentor/Purchaser
- (ii) Name and Address of consignees
- (iii) Quantity to be allotted in favour of each of the consignees and
- (iv) The corresponding rail heads

for the quantity of cement earmarked for your State/U.T. may please be furnished early, direct to the concerned Regional Cement Officer, under intimation to this office.

In view of continued short production of cement in the country vis-a-vis the demands, it is necessary to assess your minimum realistic requirement of cement, so that urgent/important works do not suffer for want of the same. Under the circumstances I am directed to request you that your minimum realistic requirement of cement for the Quarter III/74 and for the future quarters, for the National Highways and Other Centrally sponsored Road works may please be furnished in the enclosed proforma. Information regarding each schemes/project such as N.H. SR, etc. should be indicated separately. It may be essential that particulars regarding requirement of cement for each of the major bridges should be indicated individually, whereas for minor bridges and culverts consolidated requirement for each NH etc. would be adequate. Necessary information for the Central works in your State/Union Territories should be sent to Ministry in one lot only for each quarter.

Your requirement of cement, for the Quarter III/74, may please be furnished in the prescribed proforma so as to reach the Ministry, before 10th May, 1974 so that the matter may be taken up with the Chief Cement Officer for necessary allocation. It may be appreciated that in case these details are not made available to the Ministry and in due time, it would not be possible for the Ministry to recommend your requirement to the Chief Cement Officer and hence to obtain necessary allocation for your State/Union Territory.

REQUIREMENT OF CEMENT FOR N.H. AND OTHER CENTRALLY SPONSORED ROAD/BRIDGE WORKS FOR THE QUARTER

for the State/U.T.

S. No.	Name & Location of Sanctioned works for major bridges & number (N.H. wise) for minor bridges & culverts.	N.H. No.	Total Qty. of cement reqd. for the entire work (M.T.)	Qty. utilised till the beginning of previous quarter (M.T.)	Qty. in stock if any at the beginning of previous quarter (M.T.)	Qty. allotted during the various quarters (M.T.) (Col. 5+6)	Total Qty. available till the end of previous quarter (M.T.)	Likely requirement during the previous quarter (M.T.)	Proposed requirement for the quarter under consideration (M.T.)	Remarks with full justification for requirement for the quarter under consideration
1	2	3	4	5	6	7	8	9	10	11

A. MAJOR BRIDGE
(Length more than 200 ft)

B. MINOR BRIDGES AND CULVERTS

No. NHVI-50 (20/77)

Dated the 15th Dec. 1977

To

All State Chief Engineers/Addl. Chief Engineers of the
State PWDs and Union Territories dealing with Roads

Subject : The requirement of insisting on acceptance tests on cement before using the same on all centrally sponsored works

The supplies of cement, conforming to the relevant prescribed Indian Standards, for all centrally sponsored works are being arranged to the States against orders placed by them on rate contracts entered into by the Director General of Supplies and Disposals. Instances have, however, come to notice where such cements have failed to satisfy the relevant requirements of the Indian Standards. This issue was discussed at the Chief Engineer's meeting held at New Delhi on 30th July, 1977, when it was felt that it may not be sufficient to rely solely on the test reports/certificates issued by the Inspection Directorate of the Director General of Supplies and Disposals based on the periodic samples tested by them. In order to ensure that only cement of the requisite quality is used on our works, it is very essential that the States also take samples and get them tested independently in accordance with the provisions of the rate contract, to check that the cement actually conforms to the prescribed standards. The cement should also be stored properly and tested again at the time of actual use on works.

2. Normally, cements manufactured in the country are covered by the following Indian Standards :—

IS : 269 — Specification for Ordinary, Rapid Hardening and Low Heat Portland Cement.

IS : 455 — Specifications for Portland Blast Furnace Slag Cement.

IS : 1489 — Specification for Portland Pozzolana Cement.

3. The necessary tests for checking the quality of cement are also indicated in the aforesaid standards as well as in the Ministry of Shipping & Transport Specifications for Road and Bridge Works and IRC Bridge Code Section III. These tests must necessarily be carried out on each batch of cement received. The test cubes should be tested before the start of the work for both the 7 days and 28 days strength as given in the relevant standards. In case low strengths are indicated, timely action should be undertaken to ascertain the cause of poor quality as well as to prevent the use of such sub-standard cements on the works. If after conducting the necessary tests the cements are found to be sub-standard, the matter, should be brought to the notice of the State Civil Supplies Department, with copies to this Ministry and the concerned Controller of Cement under whose direction the cement has been released, for taking up necessary remedial action.

No. RM-29 (2)/80

Dated the 20th August, 1982

To

All State Chief Engineers/Addl. Chief Engineers of the
State P.W.Ds. and the Union Territories
(Dealing with National Highways and other Central/Centrally financed works).

Subject : Allocation and movement of cement

As you are aware, this Ministry has been pursuing with the Cement Controller and the Ministry of Industry regarding more allocation of cement, specially OPC and regarding difficulties in their supply to State consignees. In this connection, a detailed discussion was held by the undersigned on 9th August, 1982 with the Joint Cement Controller and the action taken by the office of the Cement Controller is detailed below for your information and necessary action.

1. *Due to power cuts and other problems, the production of cement in the country has still not picked up sufficiently, even though it is expected that the production will go up due to implementation of the latest policy of supplying non-levy cement to other agencies except the Government. As and when the production is stepped up, increase in allocation to the Ministry, would be considered by the Cement Controller. The States should, no doubt, assess their requirements realistically and project only the minimum essential requirements.*

2. As a result of constant persuasion of this Ministry, Cement Controller has sent instructions last month to all the cement factories in the country to produce a minimum of 30% of their installed capacity as OPC (Ordinary Portland Cement). While obtaining authorisation from RCO concerned, you may, therefore, indicate your minimum essential requirement of OPC to him and request him to mention it specifically in the release order, so that the cement factories definitely supply that quantity of OPC. If the release order

does not indicate the quantity of OPC to be supplied, the cement factories might only supply PPC (Pozzolana Portland Cement). It is, therefore, requested that your consignees may be instructed suitably.

3. *Two factories, namely, Orissa Cement Works, Rajganpur and cement factory at Dalmiapuram (Tamil Nadu) are producing High strength cement in the country.* The Cement Controller has since fixed the cost for the same, in consultation with the manufacturers and the major users like Railways, Ministry of Irrigation, etc. Your requirement, if any, of the high strength cement may, therefore, be indicated to the Ministry while sending your demands for the future quarters.

The manufacturers of high strength cement have, however, informed that the manufacture of this quality of cement would adversely affect their capacity production in view of the process involved, and therefore for fixing the quantum of levy/non-levy cement, the Cement Controller should consider a production of 1.5 tonnes of levy cement for every tonne of high strength cement produced in their factory. This has been agreed by the Ministry of Industry and, therefore, while giving the bulk allocation to this Ministry, if any State asks for high strength cement, their overall allocation will be reduced proportionately. For example, if 1,000 tonnes of high strength cement is allotted to some State, their allocation will be considered as 1,500 m. tonnes. Since the cost of high strength cement is also bound to be high, the States should only project their minimum essential requirements.

4. The import of cement has practically been stopped, by the Cement Controller, as the cost is very high. If this price is included in the pooled price, other consumers are likely to be unnecessarily burdened. Further, according to Cement Controller, the cement factories in the country produce OPC conforming to relevant ISS. It is, therefore, necessary for users requiring imported cement to follow the lengthy procedure of indicating their requirement to a common State agency fixed in their State, who will consolidate the requirements of the entire State and import cement through the State Trading Corporation. Since the supply of imported cement following this lengthy process is going to take considerable time and will be more costly, the States may not like to go in for imported cement.

5. The policy of reimbursement of extra freight incurred due to movement of cement by road transport still continues, wherever it has been found difficult to move cement by rail. However, since the Railways have increased the freight rates twice or thrice recently, reimbursement given by Cement Controller would only be limited to the rates that prevailed at the time of issue of their earlier circular in this connection. Cement Controller has also instructed RCOs to utilise the services of Central Inland Water Transport Corporation, Calcutta for movement of cement by river route to North Eastern States, as far as possible.

180.4.

No. RW/RMP-29(5)/83

Dated the 9th August, 1983

To

The Chief Engineers of all the States and
Union Territories dealing with National Highways

Subject : DGS&D Rate Contract for the supply of cement

Some State Chief Engineers have been mentioning, during discussions, that the cement bags supplied to them by the cement companies do not contain 50 kg. of cement in each bag, but less. It was also indicated that the quality of cement supplied is not satisfactory.

As you are all aware, orders for supply of cement are placed directly by the States against the existing DGS&D Rate Contract. A number of provisions are made in the contract regarding the quantity and quality of cement. Action to be initiated by the direct demanding officers/consignees, in case of unsatisfactory supply, has also been indicated therein. For ready reference, necessary extracts from the DGS&D Rate Contract No. HW. 6/RC-9534/Cement, dated 25.3.82, for the supply of cement are enclosed.

It may be observed that :—

- (i) For despatches by rail, the supplier is not responsible for loss, shortage, damages, etc., in transit *provided that cement has been booked at railway risk under clear RR*. In such cases, claims for the loss, shortage, damages, etc. should be lodged by the consignee with the Rlys. after making suitable remarks in the delivery book. The supplier may also be informed simultaneously.
- (ii) For despatches by rail on owners risk or qualified RR, supplier is responsible for loss, shortage damages, etc.
- (iii) For consignments by road in the trucks arranged by the indenter themselves, supplier's responsibility for quantity will end at the factory. But the consignee's representative will be provided full facility by the supplier for weighing of cement, counting of bags, etc.
- (iv) As regards quality, firm will be bound by the test result of monthly samples taken by the DGS&D inspector. If the consignee desires, he can also get confirmatory test done, as provided in para 11 (c)-copy enclosed.

The contents of this letter may kindly be brought to the notice of all DDOs/Consignees in your State for their information and necessary action.

Your kind attention is also invited to this Ministry's circular letter No. NHVI-50 (20)/77, dated 15th Dec., 1977 for taking suitable action.

Amendments made to rate contracts for the supply of Cement with effect from 1.4.82 to 31.3.1983, since extended upto 31.3.1984.

Page — 7.

(III) Supplies against the rate contract shall be duly packed in New/Serviceable second hand DW heavy Cee Gunny Bags, unless the indentors specifically desire to obtain naked supplies. In case of packed cement it shall be packed in New/Second hand DW heavy Cee gunny bags of 50 KG net capacity. Each bag will be **marked** to indicate the net cement contents of 50 KG (20 bags to a Metric Tonne). Min. of Ind. (Deptt. of Ind. Dev.) will decide the ratio of new & serviceable second hand DW heavy cess jute bags for packing.

Page — 8

(VI) The permissible tolerance on the weight of cement supplied in bags shall be plus/minus 2½% per bag with an overall tolerance of plus/minus ½% per wagon load of 20-25 metric tonnes.

Page — 22

16 (ii) It is obligatory on the consignee/indentor to take delivery of wagons on indemnity bond in case they do not receive the **despatch** advice and R.R. in time should any demurrage/warpage charges be incurred consequent in delay on the part of the producers works in forwarding the Rly. receipt the amount of such charges shall be payable by the producers and be deducted from the supplies bill.

Page — 23

(vi) Cement shall be booked at Rly. risk by the works to such destinations as may be notified by the Buyers of the Indenting officer and all conditions of the Rly. receipt shall be binding upon the buyers and railway weight shall be accepted as correct and the clear R.R. for cement delivered to the carrier by the suppliers works shall be evidence of correct delivery and time for delivery.

Page — 28

18. Responsibility for loss, shortage, damages, etc. in transit.

Although the price is F.O.R. Destination Rly. Station basis, the **responsibility** of the suppliers for loss/shortage or damage enroute or at destination ceases once the goods are handed over to the carriers after booking the consignments under clear Rly. receipts at Railway risk. If there is any shortage or damages in supply, it must be recorded by the consignee with the carriers at the time of taking delivery and a claim for the same should be preferred by him immediately with the carriers concerned. It is obligatory on the consignee to insist suitable remarks in the delivery book regarding shortage/damage etc., and to prefer their claims in time and also to inform the supplier simultaneously.

The suppliers are responsible for obtaining clear receipts from the Railways. Endorsement of SC signifying "said to contain" must not be accepted. The suppliers must insist on the contents of the wagon being verified. On proof that the Rly. authorities at the station of despatch refused clear receipts owing to the nature of the store "said to contain" receipt may be accepted by the consignee. In such cases the suppliers must accept entire responsibility or unadmitted contents.

- N.B. : (1) For loss/shortage/damages in transit in respect of consignments booked under clear R/Rs at Rly. risk the supplier will not be responsible. In such cases the consignee will take up the matter with the carrying railway for direct settlements. If the claims are rejected by the carriers, the Indentors/Consignees will have to bill the loss. The Pay & Accounts Officer will make full payment for the quantity despatched.
- (2) For loss/damage/shortages in respect of consignment of cement despatched under qualified R/R or at owner's risk, the responsibility will rest with the suppliers and the Pay & Accounts Officer will make necessary recoveries on basis of remarks incorporated by the consignees on the receipted certificates.
- (3) It is obligatory on the part of the **Indentors/Consignee** to indicate on the receipt certificates the nature of the Rly. receipts in the following way :—

The stores were despatched under clear Railway Receipt marked "S.C." (meaning said to contain) S.W.A. (meaning Sender's weight accepted) 'L&W' by Owners/Loading not supervised by Railways at Railway Risk/Owner's risk.

Extract from Amendemnt 425 dated 30.4.83

1. Period of Rate Contract :

Period extended from 1.5.1983 to 31.3.1984.

2. Clause 16 : Transportation by road and trucks. Add the following :

Suppliers will not be responsible for quality/quantity in respect of consignments transported by road in the trucks appointed by the indentors themselves. This will be subject to condition (a) Supplier will provide full facility for weighing of cement, **counting of bags etc. to satisfy consignee's** representative regarding quantity of cement and (b) regarding quality firm will be bound by test result of monthly samples (Clause 10 regarding sampling and test).

CLAUSE II (C) — SAMPLING AND TEST

Should consignee have any fault to find with a consignment. He shall do so within a reasonable time i.e. within 10 days from the actual receipt of the wagon/wagons and shall intimate the producers concerned by registered post his intention of drawing a representative sample for confirmatory test by the National Test House and invited the representative of both the producer and the Inspector to be present at the time of drawing samples. The Consignee's and the Producers representatives alongwith the Inspector shall then jointly draw three samples of 4.5 Kgs. each in the manner prescribed in clause 5 of IS : 3535 of 1966. These three samples should be jointly **sealed** by the consignee, the producers and the Inspector. One sample should be taken by the Producer's representative for testing at his works and the other sealed samples should be sent to the National Test House who will open the test any one and preserve the other with joint seals intact as a reference sample for a check test in the case of disputes. If the representatives of the

producers and the Inspector do not arrive within 14 days of the issue of the registered letter, the (consignee) shall draw three samples of 3.5 Kgs. each in the manner prescribed in clause 5.6 of IS : 3535 of 1966 seal then and send two sealed samples to the NTH to be tested by them in the manner stated above and send the third sample to the Producer concerned. The Producers and the Inspector concerned should be advised about this.

In the event of the results of the test obtained by the National Test House showing it not to comply with the requirements of the contract specification, the sealed reference sample with the NTS shall be tested at the National Test House in the presence of the Representative of the producers and the consignee and the results of such testing shall be binding on its receipts concerned.

For the sample sent by the consignee, the consignees shall bear the test charges unless the samples fall in the test in which case the charges for test shall be borne by the contractors.

9. SPECIFICATIONS AND SAMPLINGS & TESTS

A SPECIFICATIONS

The Cement shall comply with the Indian Standard Specification No. 269 of 1976 or 1489 of 1976 or 455 of 1976 including all such amendments as may be issued from time to time to the relevant specification depending upon whether cement supplied is Ordinary Portland Cement, Portland Pozzolana Cement or Portland Blast Furnace Cement in all respects and the acceptance or rejection of supplied would be on the basis of compression strength.

180.5

Letter No. CC/CO/22 (I-A)/84/4342 dated 21st May, 1984, from the Cement Controller to the Govt. of India Ministry of Industry,

To

The Director General (Road Development)

Please refer to your D.O letter No. RM-29 (5)/83 dated 15.2.1984 regarding release of OPC to the extent of 60% of the allocated quantity of cement for the construction of bridges on National Highways by the Roads Wing of the Ministry of Shipping and Transport. I have had the matter examined keeping in view the overall availability of cement of Ordinary Portland variety.

The cement factories are required to make available OPC to the extent of 30% of their levy obligation. *This does not apply to those factories which are licensed to manufacture slag cement.* Thus the overall availability of OPC is less than 30%.

As per the cabinet decision, the requirement of OPC of the Irrigation and Power Projects is to be met to the extent of 50% of their allocated quantity. Practically all other departments also ask for part of the supplied OPC variety. Thus the remaining quantity of OPC available is not adequate to meet 60% of the allocation of Roads Wing which would come to a considerable quantity of 35,400 tonnes per quarter ($59,000 \times 60\%$).

In view of this, we will be able to release up to 30% only of OPC, of the allocation of Roads Wing, on an overall basis. Any adjustment as between projects which may require more or less than 30% of OPC, as may be considered necessary by Roads Wing, will be accepted by us.

191 CEREMONIES

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
191.1.	NHIII/P/17/76 dt 17.3.1976	Opening/Foundation-Stone-laying ceremonies in respect of NH Works and naming of Bridges etc. Falling thereon.	191/1
191.2.	NHIII/P/47/82 dt 20.9.1982	NHs-Publicity-Issue of advertisement of Roads/Bridges Project	191/1
191.3.	DO No. NHVI-50 (3)/83' dt 5.5.83	Opening/Foundation-Stone laying ceremony in respect of NH Works and naming of Bridges etc. falling thereon.	191/2
191.4.	RW/NHIII/P/17/76-Vol. II dt 15.1.85	Opening/Foundation-Stone laying ceremony in respect of NH works.	191/2

No. NHIII/P/17/76

Dated the 17th March, 1976

To

All State Governments,
(Department dealing with roads)

Subject : Opening/foundation-Stone-laying ceremonies in respect of National Highway works and naming of bridges etc. falling thereon

I am directed to say that instructions issued by the Government of India from time to time on the subject of naming of bridges, or holding various ceremonies in respect of National Highways. Such as foundation laying or the opening of major works on National Highways financed by the Centre have been reviewed. As a result thereof, the following consolidated instructions are issued for your general information and guidance.

I. Naming of bridges on National Highways

Requests are sometimes received for naming a National Highway or a bridge falling on a National Highway after some political leader or other important person of that area. It is felt by the Govt. of India that it would be desirable *not* to attach personal names to public works as far as possible. However, if it becomes unavoidable, prior permission of this Ministry may please be sought.

II. Opening/foundation-stone-laying ceremonies

- (1) As the National Highways vest in the Central Govt. and all expenditure on the construction/improvement/development/maintenance of National Highways is incurred from Central funds, it is highly desirable that all ceremonies in respect of National Highway works are held by the State Govts. only after obtaining formal approval of the Govt. of India. For this purpose necessary proposal is required to be sent to this Ministry along with all the relevant details well in advance so that the suggestions of the Govt. of India, if any can be communicated in good time. In fact, when the **foundation-stone of a National Highway bridge is to be laid or a road/bridge work is nearing completion**, the State Chief Engineer should make a report about it to this Ministry, who will then take a decision about the date of the ceremony as well as the dignitary who would perform it.
- (2) The expenditure on such inaugural ceremonies should not exceed Rs 500/- in all, on each occasion, including expenditure of a contingent nature like printing of invitations, provision of **shamianas**, refreshments, garlands, photographs. Prior sanction of the Govt. of India is necessary for incurring the aforesaid expenditure. Due to the need for exercising economy in expenditure such functions should however, be restricted to only major works of importance and the number of invitees should be kept within reasonable limits.
- (3) Care should be taken to see that due courtesy is extended to the elected representatives of the people such as Members of Parliament, State Legislatures and Presidents of Panchayats and invitation cards, special car park labels and brochures etc. issued in connection with such functions, are supplied to them and suitable seating arrangements made for them.

No. NHIII/P/47/82

Dated the 20th Sept., 1982

To

The Chief Secretary, Delhi Administration, Delhi. The Secretary, P.W.D., Delhi Administration.

Subject : National Highways — Publicity — Issue of advertisement of Roads/Bridge project

It has come to the notice of this Ministry that an advertisement pertaining to an inauguration of Fly-Over in Delhi was published in English in a Hindi Newspaper. It will be appreciated that Hindi knowing persons who read Hindi Newspapers will not be able to understand the English advertisement published in Hindi papers and as such it is not a correct procedure. I am, therefore, to request that in future only Hindi advertisement should be given for publication in Hindi Newspapers and English advertisement in English Newspapers where necessary. Instructions may, therefore, kindly be issued to all concerned under intimation to this Ministry.

D.O. No. NHVI-50 (3)/83

Dated the 5th May, 1983

To

Secretaries to State P.W.D.s (by name)/All Chief Engineers (by name)

Subject : Opening/foundation stone laying ceremony in respect of NH works and naming of bridges etc. falling thereon

A copy of this Ministry's Circular No. NHIII/P/17/76 dt. 17.3.76 on the above subject is enclosed.

2. Instances have come to the notice wherein the above instructions have not been followed resulting in an awkward situation. As all the N.H. works come under the purview of direct control of the Govt. of India, it is advisable and necessary that the State Governments, who act *merely as agents to the Govt. of India* with regard to NH works, follow the instructions issued by the Govt. of India in respect of NH works scrupulously in letter and spirit. Non-compliance or violation of instructions would be embarrassing both to the State Govt. as well as to the Central Government. It is therefore, reiterated that concerned State Departments make all efforts to strictly comply in full with the instructions issued by the Govt. of India.

No. RW/NHIII/P/17/76-Vol. II

Dated the 15th January, 1985

To

All Chief Engineers
(dealing with National Highways in States/Union Territories)

Subject : Opening/Foundation stone laying ceremony in respect of National Highway works

I am directed to say that the practice hitherto has been to issue Invitation Cards for opening/foundation stone laying ceremonies in respect of National Highway works on behalf of the Secretary, Ministry of Shipping and Transport irrespective of whether the Union Secretary attends the function or not.

2. In accordance with this Ministry's letter of even number dated the 17th March, 1976 prior approval of this Ministry is required to be obtained for the purpose of holding such ceremonies in respect of National Highway works. For this purpose necessary proposal is required to be sent for approval of this Ministry alongwith all the relevant details well in advance so that the suggestions of the Government of India, if any, can be communicated to the State Government in good time. In fact, when the foundation stone ceremony of a National Highway bridge is to be held or a road/bridge work is nearing completion, the State Chief Engineer is required to make a report about it to this Ministry who will take a decision about the date of ceremony as well as the dignitary who would perform it.

3. In partial modification of the instructions contained in this Ministry's letter of even number dated the 17th March '76 it has now been decided that

- (i) Prior approval of this Ministry be obtained for such functions and copy of the request be invariably endorsed to our R.O./E.L.O.
- (ii) The Invitation Cards be issued in the name of Union Transport Secretary or DG (RD) whosoever is attending the function.
- (iii) The Invitation Cards be issued on behalf of the Ministry of Shipping and Transport Government of India in case Union Transport Secretary or DG (RD) do not attend the function.

The format of the invitation cards, to be issued on such occasions is annexed.

4. While seeking the approval of this Ministry to the proposed function, you are also required to furnish a draft speech to be delivered by the Chief Guest on such an occasion. This draft speech should contain all relevant material pertaining to Road Development in the State.

Annexure to letter No. RW/NHIII/P/17/76-Vol. II Dated 15th Jan., 85.

FORMAT I

(NATIONAL EMBLEM)

The Secretary/Director General (Road Development) & Additional Secretary

Ministry of Shipping & Transport

Government of India

request the pleasure of your company on the occasion of the foundation laying ceremony/inauguration of

_____ by _____
 on (day) _____, the (date, month & year) _____ at (time) _____
 R.S.V.P.

FORMAT II

(NATIONAL EMBLEM)

MINISTRY OF SHIPPING & TRANSPORT

GOVERNMENT OF INDIA

request the pleasure of your company on the occasion of the foundation laying ceremony/inauguration of

_____ by _____
 on (day) _____, the (date, month & year) _____ at (time) _____
 R.S.V.P.

192 MISCELLANEOUS DIRECTIONS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
192.1. (121.2)	NHIII/Misc/178/73 dt. 3.9.1974	Compliance of Technical Notes accompanying Sanctions to the estimates.	See Code No. 121.2
192.2	RW/NHIII/Coord/31/84 dt. 7.4.84	Checking of pilferage of Construction Materials like Cement, Steel and Bitumen	192/1

No. RW/NHIII/COORD/31/84

Dated the 7th April, 1984

To

All the State Chief Engineers,
(dealing with National Highways)

Subject : Checking of pilferage of construction materials like cement, steel and bitumen

One of the recommendations made by the Vohra Committee on Agency System for National Highways is regarding the pilferage of cement, steel and bitumen which are in short supply. The pilferage of these construction materials affects the quality of work.

It is requested that effective steps may kindly be taken to prevent the pilferage of these scarce materials so as to have the desired quality of work.

201. HIGHWAY PLANNING AND BUDGETTING

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
201.1.	PL-27 (31)/78 dt. 8.9.78	New additions to NH System PAC Recommendations	201/1
201.2.	RW/NHIII/Coord/84/84 dt. 10.5.84	Formulation of Seventh Five Year Plan 1985-90 for National Highways	201/1
201.3.	RW/B-30 (43)/84 dt. 31.7.84	Revised Estimates and Budget Estimates	201/4
201.4.	PL-30 (27)/85 dt. 6.3.85	Road Development Plan for India (1981-2001)	201/6
201.5.	RW/NHIII/Coord/84 dt. 21.3.85	Programme of Original Works to be sanctioned in 1986-87 on National Highways	201/6

201.1.

No. PL-27 (31)/78

Dated the 8th September, 1978

To

All State Governments/Administrations of Union Territories
(Deptts. dealing with Roads).

Subject : Recommendations/observations contained in the 18th Report (Sixth Lok Sabha) of the Public Accounts Committee —
New additions to the existing National Highway System

I am directed to say that the Public Accounts Committee have emphasised in their 18th Report (Sixth Lok Sabha) that before any roads are finally decided to be added to the existing National Highway System, it should be ensured that :—

- (a) they have been properly inventorised for determining their deficiencies; and that
- (b) they have been maintained by the State Governments at a reasonable standard and do not entail heavy expenditure on removal of deficiencies.

2. As the State Governments are aware, normally proposals for new additions to the N.H. system are sent by the States themselves. In order to consider these proposals in the event of there being a provision for the purpose in the plan, the Govt. of India call for certain basic data from the States about the existing status of the roads, deficiencies required to be made up for development of road (s) to N.H. standard, cost involved, etc. It will be appreciated that in order to enable the Govt. of India to have a realistic idea of the cost involved, it is necessary that information regarding the status of roads, deficiencies required to be made up etc., is furnished to this Ministry on the basis of proper inventorisation of deficiencies. The above observations of the P.A.C. are, therefore, brought to the notice of the State Governments with the request that these observations may kindly be kept in view while forwarding proposals for new additions to the existing N.H. System in future. I am further to add that while sending these proposals, it may also be clearly stated that the two requirements mentioned in para 1 above have been attended to.

201.2.

No. RW/NHIII/COORD/84/84

Dated the 10th May, 1984

To

All Chief Engineers (dealing with National Highways).

Subject : Formulation of Seventh Five Year Plan 1985-90 for National Highways

As you are aware that the Seventh Five Year Plan (1985-90) will commence from next financial year and the Ministry is required to formulate programme for the development of National Highways for that Plan period. For this it is essential to identify the deficiencies on the National Highway System that would be existing on 1.4.1985.

The deficiency data on the National Highways System available in the Ministry at the time of formulation of Sixth Five Year Plan covered various deficiencies in the system like missing links, missing bridges, low grade sections, single lane roads etc. and these are quite old and thus need updating. In view of the meagre allocations made available for the removal of deficiencies in the Sixth Five Year Plan, only a limited programme could be tackled and still much remains to be done. Recently the Vohra Committee has assessed the requirement of funds for the removal of these deficiencies at Rs 4500 crores (at 1983 price level). As per the present price level this cost may go up further.

As the existing deficiencies are of huge magnitude and the investment required for their removal is so large, it is obvious that the whole programme cannot be tackled in one plan period and has to be phased out to at least over two Plan periods. Thus, the Seventh Plan can be formulated on the basis of removal of at least fifty per cent of the deficiencies.

The Ministry have evolved some proformae for assessing these deficiencies and these are enclosed. It is requested that the requisite information in the said proformae may kindly be furnished so that the deficiencies existing on all National Highways in the country could be quantified. Based on these deficiencies, a programme for the seventh Plan could then be drawn up. While assessing the deficiencies, all works sanctioned or proposed to be sanctioned upto 31.3.1984 should be considered as deficiencies already tackled and should not be included in the deficiency statements.

While the exact outlay for the Seventh Plan is still not known, the Working Group on Roads for the Seventh Plan has projected an outlay of Rs 3000-Rs 4000 crores for the National Highways. This is against

an outlay of Rs 660 crores provided in the Sixth Plan. This will give a rough idea of the likely outlay that might ultimately be agreed to by the Planning Commission.

In drawing up proposals for the Seventh Plan, it is requested that the following categories of works be kept in view :

Road Works

1. Construction of missing links
2. Improvements to low-grade sections
3. Reconstruction of culverts
4. (a) Widening and strengthening of single lane sections to two lanes
(b) Widening single lane sections to two lanes without strengthening
5. Strengthening weak two lane pavements
6. Widening heavily trafficked two-lane sections to four lane divided carriageways
7. Construction of new Expressways on selected routes
8. Improvements to geometrics and road junctions where conditions are acute with prime importance to the provision of adequate sight distances
9. Removal of bottlenecks/congestions by
(a) Construction of bypasses
(b) Replacing railway level crossings with road over/under bridges
10. Permanent remedial measures for flood and cyclone-prone reaches
11. Road safety measures, such as provision of traffic signs, improvement of junctions and rectification of substandard geometric and cross-sectional deficiencies.
12. Wayside amenities like provision of rest places and truck parking complexes at suitable intervals and landscaping
13. Additions to the National Highway System.
14. Measures to contain ribbon development on existing sections so that the construction of costly bypasses is avoided.
15. Acquisition of land to bring the land width to National Highway standards.

Bridge Works

1. Construction of major and minor bridges on missing links and construction of missing bridges on other reaches.
2. Replacing submersible bridges with high level bridges.
3. Reconstruction of weak (unsafe for Class 18-R) and narrow major bridges.
4. Reconstruction or widening of weak damaged (unsafe for Class 18-R) or narrow minor bridges including replacing causeways and dips
5. Reconstruction of bridges which are safe for class 18-R loading but unsafe for Class 40-R loading.

In drawing up the proposals, the schemes under Arterial National Highways (Nos. 1, 2, 3, 4, 5, 6, 8, 25, 26, 7 (Shivpuri-Jhansi-Nagpur-Hyderabad-Bangalore*) (*Indicates section consisting of various NHs.) 31, 34, 37 and 40 (Calcutta-Dalkhola-Gauhati-Saikhoghat and Joraghat-and Jorahat-Shillong) may please be indicated separately since they are assigned a different priority.

It is requested that the deficiency statements and Plan proposals may please be furnished to this Ministry by 31st July, 1984.

It is also necessary to immediately identify the schemes to be taken up during the Annual Plan 1985-86. The first priority for inclusion in this list should be those works which were included in the Sixth Plan but could not be sanctioned till 31st March, 1984 and are not included in the 1984-85 list. Some further schemes can be included in the list of schemes that could not be sanctioned from the Sixth Plan if is not sufficiently large in any State. The list should be restricted to 3 times the amount of the 1984-85 list for each State. This list may also be furnished by the 31st July, 1984.

Encl : Set of proforma

DEFICIENCIES ON NATIONAL HIGHWAY SYSTEM AS ON 1.4.1985

1 Construction of Missing Links

State _____

S. No.	NH No.	Reach/Section (with Starting and ending km)	Total Length in (km)	Major Bridges if any (Nos.) and Waterway	Minor Bridges if any (Nos.) and Waterway	Total estimated cost (Rs crores)					Total	Remarks
						Land Acqui- sition	Earth- work and cul- verts	Pave- ment single lane	Major Bridges	Minor Bridges		
1	2	3	4	5	6	7	8	9	10	11	12	13

II. IMPROVEMENT TO LOW GRADE SECTIONS

State : _____

S. No.	N.H. No.	Reach/Section (with starting and ending km)	Present Status	Total Length	Estimated Cost (Rs crores)	Remarks
1	2	3	4	5	6	7

III. WIDENING SINGLE LANE TO TWO LANES WITH/WITHOUT STRENGTHENING

S. No.	NH No.	Reach/Section (with starting and ending km)	Total length km	Widening		Addl. Cost of strengthening (if required)		Present Traffic in terms of P.C.U.s. per day and commercial vehicles per day	Remarks
				Length km	Estimated Cost (Rs crores)	Length km.	Estimated Cost (Rs crores)		
1	2	3	4	5	6	7	8	9	10

IV. STRENGTHENING EXISTING WEAK 2-LANE PAVEMENTS

S. No.	NH No.	Reach/Section (with starting and ending km)	Total length km	Present traffic in terms of commer- cial vehi- cles per day	First Stage Strengthening		Second Stage Strengthening		Remarks (Proposal in brief)
					Length km	Estimated Cost (Rs crores)	Length	Estimated Cost (Rs crores)	
1	2	3	4	5	6	7	8	9	10

V. WIDENING TO 4-LANES

STATE

S. No.	NH No.	Reach/Section (with starting and ending km)	Total Length km	Major Bridges Nos.	Minor Bridges Nos.	Estimated Cost (Rs crores)					Present Traffic P.C.U.s. per day	Remarks
						Land Acqui- sition	Pave- ment (includ- ing E/W CD works etc.)	Major Bridges	Minor Bridges	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13

VI. PROVIDING BYEPASSES AROUND CONGESTED TOWNS OR IMPROVEMENTS AS PERMANENT SUITABLE URBAN LINKS.

S. No.	NH No.	Reach	Name of Town to be bypassed	Length km	Estimated cost (Rs crores)				Remarks
					Land Acquisition	Cost	Bridges/ overbridges	Total	
1	2	3	4	5	6	7	8	9	10

Note : Information for those bypasses for which land acquisition has already been sanctioned should be given separately.

VII. CONSTRUCTION OF RAILWAY TO OVER/UNDER BRIDGES

S. No.	NH No.	Section	Location railway crossing	No. of closures in 24 hrs.	No. of fast moving vehicles per day	Train vehicles Unit per day	Estimated Cost (Rs crores)				Remarks
							Land acqui- sition	Appro- aches	ROB/ RUB proper	Total	
1	2	3	4	5	6	7	8	9	10	11	12

VIII REACHES WITH INADEQUATE LAND WIDTH

S. No.	N.H. No.	Section from km to km	Existing land width (m)	Proposed land width (m)	Estimated Cost (Rs crores)	Remarks
1	2	3	4	5	6	7

IX MISSING MAJOR AND MINOR BRIDGES (OTHER THAN ON MISSING LINKS)

S. No.	N.H. No.	Reach/Section	Location of missing major/minor bridges	Waterway needed (m)	Cost Rs	Total	Remarks
1	2	3	4	5	6	7	8

X REPLACING SUBMERSIBLE BRIDGES WITH HIGH LEVEL BRIDGES

S. No.	N.H. No.	Reach/Section	Location of Submersible bridge	Waterway needed	Cost Rs	Total	Remarks
1	2	3	4	5	6	7	8

XI RECONSTRUCTION OF WEAK (UNSAFE FOR CLASS 18-R) AND NARROW MAJOR BRIDGES

S. No.	N.H. No.	Reach/Section	Location	Waterway	Cost Rs	Total	Remarks
1	2	3	4	5	6	7	8

XII. RECONSTRUCTION OR WIDENING DAMAGED, WEAK (UNSAFE FOR CLASS 18-R) OR NARROW MINOR BRIDGES INCLUDING REPLACEMENT OF CAUSEWAYS AND DIPS.

S. No.	N.H. No.	Reach/Section	Location of minor bridges			Waterway	Cost Rs	Total	Remarks
			Weak or damaged	Narrow	Causeways and dips				
1	2	3	4	5	6	7	8	9	10

XIII. RECONSTRUCTION OF BRIDGES WHICH ARE SAFE FOR CLASS 18-R LOADING BUT UNSAFE FOR CLASS 40-R LOADING.

S. No.	N.H. No.	Reach/Section	Location	Waterway	Cost Rs	Total	Remarks
1	2	3	4	5	6	7	8

201.3

No. RW/B-30 (43)/84

Dated the 31st July, 1984

To

The Secretary to the Govt. of Andhra Pradesh/Assam/Bihar/Delhi Admn./Goa/Gujarat/Haryana/Himachal Pradesh/Jammu & Kashmir/Karnataka/Kerala/Madhya Pradesh/Maharashtra/Manipur/Meghalaya/Nagaland/Orissa/Punjab/Rajasthan/Tamilnadu/Uttar Pradesh/West Bengal/Arunachal Pradesh/Pondicherry.
(Dealing with National Highways)

Subject : R.E. 1984-85 and B.E. 1985-86 relating to :

- (i) Construction and development of National Highways
- (ii) Purchase of machinery for NHs
- (iii) Establishment of workshops

I am directed to refer to this Ministry's letter No. RW/B-30 (51)/84, dated 19th May, 1984, wherein the allocation for expenditure on the construction and development of National Highways in your State during

the current financial year has been intimated and to request you to furnish the proposals for R.E. 1984-85 and B.E. 1985-86, in triplicate, separately for Road Works and Bridge Works in the enclosed proforma so as to reach this Ministry by the 26th September, 1984 at the latest. The requirements may be furnished separately for each of the categories indicated above.

2. While formulating proposals for B.E., the current financial stringency may be kept in view. The requirements should therefore, be framed in a realistic manner, keeping in view the guidelines issued by this Ministry from time to time and also with a view to effect maximum economy giving detailed justifications for the requirements with the financial implications which will follow if adequate funds are not provided. It may also please be ensured that no provision is included for sanctioned works in excess of the amount which may result in the total expenditure on the work exceeding the sanctioned cost beyond permissible limits of excess, unless revised estimates have been approved by the competent authority.

3. In accordance with the recommendation of the 23rd report of the Public Accounts Committee (Fourth Lok Sabha) works provided for in the earlier years which have not been actually commenced and no expenditure incurred, thereon till the previous year are to be treated as 'New Works' and not as 'Works in Progress'. It is, therefore, requested that these instructions may also be taken due note of while preparing the Budget proposals.

4. The details of the proposals may be furnished in a consolidated manner so as to provide for one work at one place only and not division-wise which results in confusion. It will be appreciated if the works are arranged, as far as possible, in the ascending order of Job-numbers.

REVISED ESTIMATES 1984-85 AND BUDGET ESTIMATES 1985-86 FOR CONSTRUCTION AND DEVELOPMENT OF NATIONAL HIGHWAYS/TOOLS & PLANTS FOR NHS/ESTABLISHMENT OF WORKSHOPS

Sl. No.	Name of Job work	No.	Approved cost		Actual expenditure			B.E. 1984-85	R.E. 1984-85	B.E. 1985-86	Reason for variation between 9 & 10	Reason for variation between 10 & 11	Whether R.E. sent or not in cases where the expenditure has exceeded the sanctioned cost
1	2	3	Original	Revised if revised estimates sanctioned	Up to March 84 (pro-gressive)	During 84-85 (upto Aug. 84)	1.9.84 to 31.3.85 (anticipated)	9	10	11	12	13	14
			4	5	6	7	8						15

Part-I-a WORKS IN PROGRESS (carryover works from the pre-V Plan period)

(i) Works each costing Rs 10 lakhs or more

- (1)
- (2) etc.

(1) , Works costing less than Rs 10 lakhs each

- (1)
- (2) etc.

Part-II(a) Works in Progress (sanctioned during the 5th Plan period and afterwards)

(i) Works each costing Rs 10 lakhs or more

- (1)
- (2) etc.

(ii) Works costing less than Rs 10 lakhs each

- (1)
- (2) etc.

Sl. No.	Name of works	Job No.	Estimated cost	Revised Estimates 1984-85 (Provision)	Budget estimates 1985-86 (Provision)	Balance to complete	Remarks
1	2	3	4	5	6	7	8

Part II : New Works : Works provided for in the earlier years which have not been actually commenced and no expenditure incurred thereon till the previous year or which were commenced in the last quarter of the previous year.

(a) *Works each costing Rs 10 lakhs and more :*

- (1)
- (2) etc.

(b) *Works costing less than Rs 10 lakhs each :*

- (1)
- (2) etc.

Sl. No.	Name of works	Estimated cost	Revised Estimates 1984-85	Budget Estimates 1985-86	Balance to complete	Remarks
---------	---------------	----------------	------------------------------	-----------------------------	---------------------	---------

Part III — Really New Works (i.e. yet to be sanctioned)

(a) *Works each costing Rs 10 lakhs and more :*

- (1)
- (2) etc.

(b) *Works costing less than Rs 10 lakhs each :*

- (1)
- (2)

201.4

No. PL-30 (27)/85

Dated the 6th March, 1985

To

All Secretaries (dealing with Roads)
of State Governments/Union Territories

Subject : Road Development Plan for India (1981-2001)-Follow-up Action

You may be aware that the Indian Roads Congress had set up a Working Group for formulation of Road Development Plan for the period 1981-2001. The Plan has been finalised after it was adopted by the Council of Indian Roads Congress and accepted by the State Chief Engineers in September 1984 at Trivandrum. A copy of the Plan is enclosed. Further, copies of the Plan can be had from the Secretary, Indian Roads Congress, IDA Building, Jamnagar House, Shahjahan Road, New Delhi-110 011.

2. I am to request that the road development plans in respect of your State may be framed on the lines indicated in the "Road Development Plan for India". Recommendations, policies and guidelines detailed therein may be given due consideration while formulating and implementing the Five Year Plans and Annual Programmes for road development in the State.

3. Action taken in this regard may please be intimated to this Ministry.

201.5

No. RW/NHIII/Coord/84

Dated the 21st March, 1985

To

1. All Chief Engineers (dealing with National Highways) in States and Union Territories
2. D.G. (Works), C.P.W.D., New Delhi
3. D.G. (BR), New Delhi

Subject : Programme of original works to be sanctioned in 1986-87 on National Highways

I am to state that the preparation and sanction of estimates provided in the annual programmes can be completed in time if the schemes are identified sufficiently in advance. With this objective in view, it is considered necessary to immediately identify the schemes to be sanctioned during the year 1986-87.

2. The following guidelines have been drawn up to select such schemes :

ROAD WORKS

1. First priority should be given to sanction works in connection with the construction of missing links.
2. Works pertaining to improvement of low-grade sections should receive high priority.
3. Land acquisition in connection with reconstruction of weak bridges and construction of missing bridges proposed to be taken up in the next 1-2 years should be provided.
4. Reconstruction/widening of weak and narrow culverts should be given high priority.
5. Improvements to geometrics and road junctions where conditions are acute and frequent accidents are caused should receive high priority.
6. A programme of widening of single lane roads to two lanes should be drawn up and depending upon the position of funds in 1986-87, a good length of such widening should be provided. Simultaneously, strengthening of the pavement should be provided, where needed.
7. Strengthening of weak two-lane sections where traffic is heavy and the pavement is deficient should be provided.
8. A limited programme of widening two lane roads to four lanes can be suggested wherever the traffic intensity is extremely high.
9. Replacement of railway level crossings by over-bridges should be provided wherever traffic hold-ups are of a high order.
10. Permanent remedial measures for flood and cyclone-prone reaches should be provided.
11. Installation of new Road Signs should be included.
12. Provision of wayside amenities such as truck parking complexes and rest places should be included in the programme.
13. The exact reaches where the improvement measures are proposed should be identified and their selection should not be left to a later date. The reaches should not be of isolated and small lengths but should be of substantial and continuous length.

BRIDGE WORKS

1. Construction of major and minor bridges on missing links and construction of missing bridges on existing routes should receive high priority.
2. Replacing submersible bridges and causeways with high level bridges should receive priority.
3. Reconstruction of weak bridges (unsafe for Class 18-R) and reconstruction/widening of narrow major and minor bridges should be included.
4. Some selected bridges which are safe for Class 18 R but unsafe for Class 40 R should also be included.
5. Bridge works should be proposed only if land for the bridge and approaches is available or where short approaches can be constructed within the available land to commission the bridge.
6. Provision for approaches should be made in the case of all bridges proposed in the Annual Plan.

2. In drawing up the proposals, the schemes under Arterial National Highways, viz. Nos. 1, 2, 3, 4, 5, 6, 7 (Nagpur-Hyderabad-Bangalore Section), 8, 25 (Shivpuri-Jhansi Section), 26, 31, 34, 37 and 40 (Jorakat-Shillong), may be indicated separately since they are assigned a different priority.

3. The Seventh Five Year Plan for the National Highways is yet to be decided. However, the amount of estimates to be sanctioned in 1986-87 has been tentatively arrived at for each State depending upon the bank of sanctions and the World Bank and other special projects in hand in each State. The enclosed list indicates the amount for each State. While drawing up the lists, the amounts indicated may please be strictly adhered to. The division between roads and bridges may please be made in an approximate-ratio of 75 : 25.

4. The lists may be forwarded to the Ministry by 30th May 1985 in order to enable the Ministry to finalise the same and circulate to all concerned by 1st Sept, 1985.

Encls : Printed below

Annual Programme of Sanctions on N.H. works in 1986-87

(Rs crores)

S. No	State	Amount
1.	Andhra Pradesh	8.0
2.	Arunachal Pradesh	3.0
3.	Assam	10.0
4.	Bihar	15.0
5.	Delhi	3.0
6.	Goa	6.0
7.	Gujarat	10.0
8.	Haryana	4.0
9.	Himachal Pradesh	7.0
10.	Jammu & Kashmir	5.0
11.	Karnataka	15.0
12.	Kerala	10.0
13.	Madhya Pradesh	12.0

201/8

14.	Maharashtra	10.0
15.	Manipur	4.0
16.	Meghalaya	5.0
17.	Nagaland	1.0
18.	Orissa	10.0
19.	Pondicherry	1.0
20.	Punjab	5.0
21.	Rajasthan	15.0
22.	Tamil Nadu	6.0
23.	Uttar Pradesh	20.0
24.	West Bengal	8.0
		193.0

202 HIGHWAY INVENTORY

Code No.	Circular No. & Date	Brief Subject	Page No.
202.1.	PL-10 (76) /4 dt 8.9.75	Road Registers for National Highways	202/1
202.2.	DO No. PL-10 (76)/74 dt 6.5.83	Road Register for National Highways	202/4
202.3.	NHIII/Coord/2/84 dt 19.5.84	Inventory of the NH System by Carmounted Instrument System	202/7

No. PL-10 (76)/74

Dated the 8th Sept, 1975

To

1. All State Chief Engineers dealing with National Highways (By names)
2. Director General, Border Roads Development Board, Kashmir House, New Delhi
3. Engineer-in-Chief, C.P.W.D., Nirman Bhavan, New Delhi

Subject : Road Registers for National Highways

The Ministry attaches considerable importance to the maintenance of Road Registers for National Highways, as the information in these is valuable among other things for making equitable distribution of the available funds and taking planning decisions. At the moment, the form in use for Road Registers is the one which was introduced *vide* Ministry's letter No. N-32 (3)/49, dated the 9th November, 1949. Of late, the feeling had grown that the form needed modifications in keeping with the present-day requirements of the development of National Highways system. After a detailed review, the previous form has thus been revised and made more comprehensive. I enclose three cyclostyled copies of the revised form together with instructions for filling the same, and request that this form may henceforth be adopted for the maintenance of Road Registers. For sufficient copies to be distributed among field officers you may please devise some centralised arrangement to prepare more sets of the road register forms.

2. As regards preparation and subsequent updating of the Road Registers, it is suggested that the respective Divisions looking after National Highway works may be made responsible. They may prepare the Road Registers in duplicate and supply one copy to Ministry's Engineer Liaison Officer or the Regional Superintending Engineer as applicable. The Executive Engineer of the Division may be instructed to take personal interest in this work and have the Road Registers updated regularly, at least once a year. Whenever the Road Register is updated, the modifications may also be intimated to the Ministry's Engineer Liaison Officer/Regional Superintending Engineer.

3. It is requested that early action on the above may be arranged at your end under intimation to us.

ROAD REGISTER

National Highways

INSTRUCTIONS FOR FILLING THE ROAD REGISTER FORM

1. General

The register is to be maintained for all National Highways in a uniform manner with the same notations and conventions as shown in the legend. Registers should preferably be in the form of convenient size/volumes, but these could also be maintained in an appropriate loose-leaf filing system.

Where possible each road should be entered in one register. For this purpose, the road may be divided in convenient sections. The statistical data and key map are to be given for each section separately.

2. Key Map

Key map should precede the 'statistical data' and form page 1 of the information for each section. The map must show the general topography of the area, kilometrage along the road, towns and villages served, other roads, railways, rivers etc. Its scale must not be smaller than 1 cm = 10 km. North direction must be clearly shown.

3. Statistical Data

- (i) **Rainfall** : Annual average rainfall should be based on meteorological records if possible, otherwise average should be recorded for the year(s) for which information is readily available.
- (ii) **Traffic Data** : should be based on traffic census carried out in accordance with IRC : 9-1972 "Traffic Census on Non-urban Roads".
- (iii) **Financial Statement** : is meant to reflect the recurring investment in the road both under the 'Capital' and 'Maintenance' heads. Information should be given for as many years the records are available.

In the table for 'capital' expenditure, against the sub-head 'surfacing', routine maintenance and periodic renewals are not to be included. Only the cost of new superior surfacing in replacement of the old wearing surface on account of increase in traffic, obsolescence, or other causes, is to be entered.

"Ordinary Repairs" include maintenance gangs; patch repairs; minor improvements to side drains, catch drains and shoulders; repainting of km stones, sign posts and traffic markings; expenditure on annual traffic census; repairs to culverts and bridges; repairs to inspection bungalows; and similar petty works. "Periodical Renewals" include surface painting, open-graded carpet etc. provided by way of preventive maintenance. "Special repairs" include repairs on account of occasional items such as reconstruction of retaining walls, providing water or electricity to inspection bungalows, major improvements for easing of curves or visibility, etc. "Flood damage repairs" include damage by floods, cyclones or other natural calamities usually treated separate from special repairs.

4. Plan and Longitudinal Section

The Plan should show the following by conventional signs, symbols, numerical figures or otherwise with an explanatory legend where necessary. The scale for Plan should be 1 cm = 20 m (width wise) and 1 cm = 100 m (length wise).

- (i) Centre line of the carriageway and kilometrage;
- (ii) Limits of the right-of-way with widths noted at one or more places, and at sections where there is a major variation;
- (iii) Horizontal curves with their radii;
- (iv) Railway and road crossings;
- (v) Culverts, minor bridges, dips and major bridges with brief particulars about number of spans, length etc.
- (vi) Any special features such as tanks, ponds, built-up area, villages, towns, culverts etc;
- (vii) Floodable reaches with details about depth of inundation, HFL etc; and
- (viii) Location of roadside amenities like rest houses, dak bungalows, petrol pumps etc., situated close to the road.

Longitudinal-section should normally show gradients along the road, vertical curves with their radii, position of drainage structures, location of unbridged crossings, general ground level, road level, HFL and any other useful information. Its scale should be 1 cm = 100 metres (horizontal) and 1 cm = 20 metres (vertical).

5. Width of Right of Way, Roadway, Carriageway etc.

Widths should be recorded in figures, corrected upto the first place of decimal. In the case of divided highways, the width should be shown as No. of lanes 'n' x width of each carriageway.

6. Average Height of Fill/Cut

Average height of fill/cut above the ground level should be given. There are separate sub-columns in the form for 'fill' and 'cut'

7. Soil Type

General classification of soil along the road, such as gravel, sand, sandy clay, silty clay, moorum, clay etc., should be entered in this column based on visual observations. For field identification and classification, help may be taken of IS : 1498-1970.

8. Pavement Composition

Brief details about the thickness and composition of pavement along the centre line of the road should be recorded by conventional signs and/or symbols given in the legend. Where the sub-base or base course consists of more than one material, each should be shown separately by dividing the space proportionately and noting the thickness alongside in the space provided for this purpose in the form. Where the thickness of any course varies longitudinally, the variation could be shown in the form of an inset. Pavement composition should be entered after making a few trial pits at intervals depending on the variations in crust thickness.

9. Dates of Preparation and Revision

Date upto which the left hand side of Road Register (containing Plan, L-section etc.) has been initially compiled should be clearly noted at the bottom of the sheet. When revised to incorporate any additions or alterations, the date of revision should be entered at the place provided. If major changes in information take place, a new sheet could be added in replacement of the earlier sheet.

10. Pavement Strengthening and Surface Renewal Chart

These should indicate the works of renewal/pavement strengthening carried out from year to year for as much period as the

LEGEND	
STANDARD COLOURS/SYMBOLS FOR FILING THE CHARTS IN ROAD REGISTER	
'A' SUB-BASE	
1 STONE SOLING	RED
2 BRICK Laid FLAT OR ON EDGE	PINK
3 STABILISED SOIL	YELLOW
4 GRANULAR (SAND, MOORUM, OR GRAVEL)	WHITE
5 LATERITE, KANKEROR BRICK METAL	BLACK
6 STONE W.B. MACADAM (OVERSIZE METAL)	GREY
'B' BASE	
1 STONE W.B. MACADAM	BLUE
2 BROKEN CEMENT CONCRETE	GREEN
3 BITUMINOUS MACADAM	YELLOW
4 SEMI-GROUT / FULL GROUT	WHITE
5 BUILT UP SPRAY GROUT	BLACK
'C' SURFACING	
1 SURFACE PAINTING ONE COAT	DIAGONAL LINES
2 SURFACE PAINTING TWO COAT	DIAGONAL LINES
3 OPEN GRADED CARPET	DIAGONAL LINES
4 MIX-SEAL SURFACING	DIAGONAL LINES
5 SEMI-DENSE CARPET	DIAGONAL LINES
6 ASPHALTIC CONCRETE	BLACK
7 CEMENT CONCRETE	GREY

ROAD PAVEMENT STRENGTHENING⁴ AND SURFACE RENEWALS

PLAN		LENGTH	WIDTH
SCALE HORIZONTAL = 100 M VERTICAL = 20 M		LENGTH	WIDTH
L. SECTION		LENGTH	WIDTH
SCALE HORIZONTAL = 100 M VERTICAL = 20 M		LENGTH	WIDTH
RIGHT OF WAY		RIGHT OF WAY	RIGHT OF WAY
ROADWAY		ROADWAY	ROADWAY
CARRIAGEWAY		CARRIAGEWAY	CARRIAGEWAY
MEDIAN		MEDIAN	MEDIAN
PERCENTAGE HEIGHT OF FILL		PERCENTAGE HEIGHT OF FILL	PERCENTAGE HEIGHT OF FILL
FILL CUT FROM GLIMPSHED		FILL CUT FROM GLIMPSHED	FILL CUT FROM GLIMPSHED
SOIL TYPE		SOIL TYPE	SOIL TYPE
SURFACING		SURFACING	SURFACING
BASE		BASE	BASE
SUB-BASE		SUB-BASE	SUB-BASE
COMPOSITION		COMPOSITION	COMPOSITION
PAVEMENT THICKNESS		PAVEMENT THICKNESS	PAVEMENT THICKNESS

HHS AND METRES
 (EACH VERTICAL DIVISION STANDS FOR 200 METRES)

[illegible]

* INFORMATION TO BE SHOWN (AS PER LEGEND) FOR
AS MANY YEARS AS RECORDS ARE AVAILABLE

* THICKNESS OF VARIOUS COURSES SHOULD BE
GIVEN IN MM IN THIS COLUMN

202.2

Dated the 6th May, 1983

From The Director General (Road Development) to All State CEs dealing with N.Hs (By name),
D.G.B.R. and D.G. Works, CPWD (By name)

Subject: Road Register for National Highways

As you are aware, the format for maintaining the road register was circulated under this Ministry's letter of even number dated 8th Sept., 1975. Despite persuasions, a large number of States have not yet been able to maintain the road registers as observed during the inspection by the various officers of this Ministry.

2. In this connection, it has been learnt that the present form required simplification for easy collection of data by the State PWD Divisions. The matter has, therefore, been carefully considered in this Ministry and the present form has been reviewed with a view to simplify, rationalise and up-date the same. A copy of the proposed revised format is enclosed.

3. I shall be grateful if you could furnish your comments, if any, as early as possible. However, in case no comments are received within a month from the date of issue of this letter, it will be presumed that you agree with the proposed revised format for adoption.

INSTRUCTIONS FOR FILLING THE ROAD REGISTER

1. General

The register should be maintained in each N.H. Dvn. of the State PWD covering details w.e.f. 1.4.80 (corresponding to the commencement of the 6th Plan period) with the same notations and conventions as shown in the legend for uniformity. This should be done National Highway wise under each State National Highway Division. The dates of preparation should be clearly indicated. Whenever the form is revised, the date of revision should also be indicated on the left hand side of the road register form.

The register should be bound with the size of the pages as per enclosed specimen forms. For purpose of maintaining the register, the road length should be normally divided into convenient sub-sections of 20 to 30 Kms. or even smaller length, if warranted.

2. Road Map (Page No. 1)

Road map with continuous kilometrage should be kept in the register as page No. 1 showing the topography of the area, towns, villages and other roads, railways and rivers etc. The scale should be 2 cm = 1 Km (1 : 50,000). North direction must be clearly shown. This map should also indicate the following details with their locations :

- (1) Curves with their radii
- (2) Rail & Road Crossings
- (3) Culverts/Dips/Bridges/Submersible bridges
- (4) Roadside details, such as tanks, ponds, built-up areas, villages, towns.
- (5) Location of approved quarries.

3. Statistical data (Page No. 3)

- (i) **Rainfall** : Annual average rainfall should be based on meteorological records. The maximum recorded annual rainfall also to be given.
- (ii) **Traffic data** : Should be based on traffic census carried out in accordance with IRC : 9-1972 "Traffic Census on Non-urban Roads".

4. Deficiencies Data (Page No. 3)

The identified deficiencies should be furnished as existing on 1.4.1980 on this table.

As regards the sub-item of level crossing, it is pointed out that the criteria laid down for its replacement is the product of No. of gate closures and the No. of fast moving vehicles in thousands. This index value should be given.

4.1 In case of dips/causeways/submersible bridges the number of interruptions and their duration for each in a year should be furnished.

In respect of the sub-item of weak culverts/bridges, attempt should be made to furnish the present load carrying capacity.

Specific mention should be made about special problems in the reach, if any, besides (a) land slides, and (b) sand dunes, as indicated.

Specific mention should also be made if there is lack of drainage affecting the performance of the road pavement. Further data regarding number of days of water-logging in a year should also be furnished.

5. Existing Width of land Formation and Carriageway etc. (Page No. 4)

Widths should be recorded in figures, correct upto the first place in decimal. In the case of divided highways, the width should be shown as number of lanes 'n' width of each carriageway.

6. Pavement composition : (Page No. 4)

Details to be given for four kms. in each sheet.

Brief details about the thickness and composition of pavement along the centre line of the road should be recorded. The composition should be indicated, by conventional abbreviated symbols given in the legend. Where the sub-base or base course consists of more than one material, each should be shown separately by dividing the space and noting the thickness alongside in the space provided for this purpose in the form. Pavement composition should be entered after making a few trial pits at intervals depending on the variations in crust thickness, if required.

7. Pavement Strengthening widening and surface renewal chart (Pages No. 4 & 5)

Details to be given for 4 kms in each sheet.

These should indicate the works of renewal/pavement strengthening widening carried out from year to year, starting from 1.4.80.

Specifications adopted should be shown using the same symbols as in the legend. Where more than one specification has been used for strengthening/renewal, each should be depicted separately by dividing the available space. Thickness of each course should be recorded alongside in the figures in the space provided for the purpose in the Form. It is pointed out that at times strengthening the pavement is carried out under Special Repairs and Flood Damage grants. Such strengthening should be shown under the appropriate column of "STR".

Whenever more land is acquired, the total width should be given in the column "Width (L)".

KEY MAP

Page No. 1

N.H. No.

Station :

Sub-section : From KM. _____ to KM. _____

Scale : 2 cm = 1 KM. (1 : 50,000)

STANDARD ABBREVIATED SYMBOLS FOR FILLING THE CHARTS IN ROAD REGISTER

A	SUB — BASE	ABBREVIATION
	1. STONE SOLING _____	ST.
	2. BRICK LAID FLAT OR ON EDGE _____	BK.
	3. STABILISED SOIL _____	STB.
	4. GRANULAR (SAND, MOORUM OR GRAVEL) _____	SD, MR, GR.
	5. LATERITE, KANKER OR BRICK METAL _____	LM, KM, BKM.
	6. STONE W.B. MACADAM (OVER SIZE METAL) _____	OSM.
B	BASE	
	1. STONE W.B. MACADAM _____	ST, WBM
	2. BROKEN CEMENT CONCRETE _____	BROKEN C.C.
	3. BITUMINOUS MACADAM _____	BM.
	4. SEMI — GROUT/FULL GROUT _____	SG/FG.
	5. BUILT UP SPRAY GROUT _____	BUSG
C	SURFACING	
	1. SURFACE PAINTING ONE COAT _____	SD (S)
	2. SURFACE PAINTING TWO COAT _____	SD (D)
	3. OPEN GRADED CARPET _____	PC.
	4. MIX — SEAL SURFACING _____	M.S.S.
	5. SEMI — DENSE CARPET _____	S.D.C.
	6. ASPHALTIC CONCRETE _____	A.C.
	7. CEMENT CONCRETE _____	C.C.
D	LAND ACQUISITION	LA

PAGE NO-2

STATISTICAL DATA

THESE DATA SHOULD BE RECORDED FOR EACH SECTION OF THE HIGHWAY SEPARATELY IN THE REGISTER

I NH No. _____ **II NAME OF STATE** _____

SECTION FROM _____ KM. TO _____ KM.
 SUB SECTION FROM _____ KM. TO _____ KM.
 ZERO KM STARTS AT _____

III RAIN FALL - ANNUAL AVERAGE _____ MM. MAXIMUM _____ MM.

IV NATURE OF TERRAIN - PLAIN _____ ROLLING _____ HILLY _____
 MOUNTAINOUS _____ STEEP _____

V NATURE OF SOIL - GRAVEL, SAND, LATERITE, BLACK, COTTON SOIL, SANDY CLAY, SILTY CLAY, MOORUM CLAY, & ANY OTHER TYPE _____

VI TRAFFIC DATA _____ CENSUS TAKEN AT K.M. _____

TYPE OF VEHICLES	AVERAGE DAILY TRAFFIC								REMARKS
	WEEK	1	2	3	4	5	6	7	
K.M.V. BUSES AND TRUCKS									
L.M.V. CARS / VANS									
S.M.V. BULLOCK CARTS ETC									
P.C.U.S. EXCLUDING S.M.V.									

VII IMPORTANT DEFICIENCY DATA

ITEMS	LOCATION & EXISTING VALUES
HORIZONTAL CURVE RADIUS	
STEEP GRADIENT	
INADEQUATE SIGHT DISTANCE	
ACCIDENT PRONE SPOTS	
LEVEL CROSSINGS	
JUNCTIONS	
ENCROACHMENT / CONGESTION	
INADEQUATE CLEARANCE ABOVE H.W.L / B.T.M	
WATER LOGGING AND NO OF DAYS ^{IN YEAR}	
WEAK CULVERTS	
WEAK BRIDGES	
NARROW CULVERTS / BRIDGES	
CAUSEWAYS / UNSERVICEABLE BRIDGES / DIPS	
SPECIAL PROBLEMS	
(A) LAND SLIDES	
(B) DUNES	
(C) ANY OTHER PROBLEM	
ROADING QUALITY	

[illegible]

ROAD PAVEMENT STRENGTHENING WIDENING AND SURFACE RENEWALS

202/7

[illegible]

1. THICKNESS OF VARIOUS COURSES SHOULD BE GIVEN IN MM UNDER STRENGTHENING/RENEWALS AND SYMBOL AS PER LEGEND
2. WHENEVER PAVEMENT WIDENING OR ADDITIONAL LAND IS ACQUIRED THE TOTAL WIDTH AND CORRESPONDING SYMBOL SHOULD BE FURNISHED UNDER THE APPROPRIATE COLUMNS.

202.3.

No. NHIII/COORD/2/84

Dated the 19th May, 1984

To

**All Chief Engineers dealing with
National Highways in the States and Union Territories**

Subject: Inventory of the National Highway system by car-mounted instrument system

As you are aware, an accurate inventory of the National Highway system is the basic requirement for future planning. It will help in identifying stretches with poor geometrics and bad riding quality and it will give information on the width of pavements. All these data will be of invaluable help in proper planning.

The Central Road Research Institute have acquired the technique of measuring the route characteristics through an instrumented car. The Ministry have recently sanctioned an estimate in favour of this Institute for carrying out the inventory on the full N.H. system. The work is expected to begin in June and will be completed in a year's time.

For ensuring the success of this interesting project, the active participation of and cooperation from the State PWDs are necessary. This can be achieved in the following way :—

- (1) The Executive Engineer in charge of the Division will himself travel in the car in his jurisdiction and furnish all information such as land width, soil type, bypass alignment, missing links culverts and bridges etc. He should, therefore, keep these information in advance.
- (2) The Ministry's Regional Officer or his representative will also be present during the survey.
- (3) The State PWDs will extend help in accommodation at PWD Guest houses for the party.

The proformae on which the information will be collected are enclosed herewith. Form I will be filled from readings from the instruments. Data for Form II should be supplied to the observer in the car by the State P.W.D. Executive Engineer during the survey. Instructions for filling the forms are also enclosed.

The progress to be achieved per day will be roughly 125 km. The detailed programme is being drawn up in consultation with the Central Road Research Institute and will be intimated in due course.

It is requested that the above opportunity be availed of to expose the P.W.D. staff to the new technique of route characteristics measurement and full cooperation be extended to the team.

INSTRUCTIONS FOR NATIONAL HIGHWAY INVENTORY

1. Pilot studies shall be carried out to ascertain the practical difficulties, if any.
2. Before starting the work the entire network of National Highways shall be broken into links and nodes with proper identification numbers. A link could be a small length of National Highway connecting two towns. Whenever the work has to be stopped for malfunctioning of instruments or for any reason, a new node has to be created at that point. Junctions of National Highways shall be given a node number.
3. The CRRI Survey party will be accompanied by representative from PWD and Roads Wing's Regional Office.
4. Data will be collected in two types of forms, one for recording the readings of the instruments and the other for recording visual observations/information collected from PWD.
5. Kilometrage and name of the starting and end stations shall always be noted.
6. The Distance Count (D.C.) reading at every visible kilometre stone on the National Highway shall be noted.
7. The Distance Count reading shall be noted for city/town/municipal limits. The city limits should be entered in column 1 of Form I.
8. Distance Count readings at location of Traffic Census count stations shall be noted.
9. Wherever bypasses for National Highway are provided, the geometry for the bypass shall be measured. The Distance Count reading at the beginning and end of the bypass shall be noted. The description of start of bypass and end of bypass should be entered in Column 1 of Form I.
10. Distance Measuring device shall be able to measure distances with a least count of 10 metres.
11. Rise, Fall and Roughness Readings shall be noted at $\frac{1}{2}$ km. interval. Distance count reading at state boundaries and district boundaries shall be noted.
12. Distance count readings at cross drainage works, ROB/RUB, railway crossings shall be noted. In case of Major and medium bridges (Road/Rail), D.C. at beginning and end of the bridge shall be noted, wherever possible.
13. Wherever missing links are encountered, the D.C. at the beginning and end of the missing link shall be noted. The actual length of the missing link shall be obtained from the Executive Engineer, PWD accompanying the survey car. The survey car will, however, go along the alternate route. The actual length as ascertained by the P.W.D. shall be entered in the Remarks Column.
14. The Executive Engineer, P.W.D.'s opinion on the necessity of providing a bypass to a particular town and the necessity of ROB/RUB at road/rail intersection shall be obtained, and recorded in the Remarks Column of Form I.
15. Wherever periodic renewals were done the type of PR (Seal coat/carpet) and thickness provided shall be obtained from Executive Engineer, P.W.D.
16. The type of soil based on visual inspection of the abutting land on both sides of the road shall be noted. The D.C. wherever the soil type changes shall be noted. The assistance of Executive Engineer PWD may be obtained in this regard.
17. Wherever Zero km. stones for National Highways are located like in major cities, the survey work shall be done upto these points. If Reduced Level of these points is available the same may be noted.
18. It is preferable to do not more than 120 kms. of survey each day subject to proper working of the instruments and other exigencies.
19. At the end of each day's work, the data collection forms shall be completed including data based on visual inspection/information to be obtained from PWD official. The data shall be kept in safe custody.
20. Calibration of the car mounted bump integrator with towed fifth wheel bump integrator shall be done once in a fortnight or after 1000 kms. of survey Calibration shall be done on road stretches of minimum 200 m. length and of roughness varying from 2000 mm/km to 12,000 mm/km as far as possible. The distance counter per km. should be noted when the roughness calibration is done. For this purpose, the car should be run over a measured distance.

ROAD GEOMETRY MEASUREMENT

FIELD DATA COLLECTION FORM I

Date : _____ State : _____
 Survey Vehicle No. : _____ District : _____
 Roughness Equation No. : _____ N.H. No. : _____
 Distance Count per Km : _____ Link : _____

Name of Station	Code No.	Km. stone reading	Distance Counter reading	Curve Type	Gyro Reading at		Gradient		Bump Integrator Reading (Cumulative Counts)	Remarks
					Beg. of curve	End of curve	Positive Reading	Negative Reading		
1	2	3	4	5	6	7	8	9	10	11

Note : Curve Type Right Turning — R Left Turning — L

**ROAD GEOMETRY MEASUREMENT
FIELD DATA COLLECTION FORM II**

Date :

State :

Survey Vehicle No. :

District :

Roughness Equation No. :

N.H. No. :

Distance Count Per Km. :

Link :

Name of Station	Node No.	K.M. Stone Reading	Distance Counter Reading	Land use	Pavement		If periodic Renewal done		Soil Type	Shoulder	
					Width	Type	Year	Type & Thickness (cm)		Type	Width
1	2	3	4	5	6	7	8	9	10	11	12

Note :

1. Land Use

Urban
Rural
Semi Urban

- U Cement Concrete
- R Black Topped
- SU WBM
Gravel
Earth

2. Pavement Type

- C Single Lane
- B Intermediate Lane
- W Double lane
- G Dual Carriage
- E way 4-lane
Dual carriage-
way 6 lane

3. Pavement Width

- SL Seal Coat
- IL Carpet
- DL
- DC4
- DC6

4. Periodic Renewal**5. Soil Type**

Clay
Sand
Black Cotton

- C
- S
- BC

6. Type of Shoulder

Earth
Gravel
WBM
Brick

- E
- G
- W
- B

7. Junction Type

Right Turning
Left Turning
Level Cross Road
Road under Road
Road Over Road

- R
- L
- C
- RUD
- ROD

8. Inction Cross Road

National Highway
State Highway
Major District Road
Other Road

- NH
- SH
- MDR
- ODR

9. Railway Gauge & No.

Broad Gauge
Meter Gauge
Narrow Gauge
2 lines of BG

- BG
- MG
- NG
- BG2

10. Railway Crossing Type

Level
Rod Under Rly.
Road Over Rly.

- L
- RUR
- ROR

11. Cross Drainage

Major Bridge
Minor Bridge
Submersible
Culvert

- M
- MR
- S
- C

12. Formation

Cutting
Embankment

- C
- E

Date :

State :

Survey Vehicle No. :

District :

Roughness Eqn. No. :

N.H. No. :

Distance Count Per Km. :

Link :

Junction		Railway Crossing		Cross Drainage		Road land width (m)	Formation	Remarks
Type	Cross Road	Type	Gauge & No. of lines	Bridge	Culvert			
13	14	15	16	17	18	19	20	21

203 ECONOMIC EVALUATION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
203.1.	RW/NHIII/Coord/86/84 dt 17.9.84	Use of Computer based Model for Economic Analysis of Highway and Bridge Projects	203/1
203.2.	NHIII/Coord/86/84 dt 18.3.85	Economic Analysis for Major Highway Projects	203/1
203.3. 7600	RW/RD/Misc/5/81-OR dt 22.3.85	Computer based Simulation Model	See Code No. 7600
203.4.	RW/NHIII/Coord/86/84 dt 3.5.85	Economic Analysis for Major Highway Projects	203/2
203.5. 7600	RW/RD/Misc/5/81-OR dt 28.5.85	Computer based Simulation Model	See Code No. 7600
203.6. 7600	NHIII/Coord/86/84 dt 26.6.1985	Data for Economic Analysis of Highway Projects	See Code No. 7600
203.7. 7600	NHIII/Coord/86/84 dt 12.7.85	Economic Analysis of Typical Highway Projects	See Code No. 7600

203.1.

No. RW/NHIII/COORD/86/84

Dated the 17th September, 1984

To

All State Chief Engineers dealing with NHs

Subject : Use of Computer-based Model for economic analysis of Highway and Bridge Projects.

As you are aware, the selection of a highway project should be determined on the basis of economic evaluation. The recently completed Road User Cost Study has provided the necessary data base for estimating the benefits from highway construction. Utilising these results, a computer-based highway design model has been developed by the Ministry in collaboration with the Indian Institute of Technology, Delhi. This model is at present capable of performing the cost benefit analysis of highway schemes which involve :—

- (i) Strengthening of two lane pavements
- (ii) Widening two lane pavements to four lanes
- (iii) Construction of four-lane expressways
- (iv) Construction of two lane bypasses.

The model has been used successfully for the economic analysis of certain projects which are being projected for assistance from the World Bank.

2. It is suggested that advantage of the capabilities now developed may be availed of by your Organisation when projecting highway and bridge schemes, covering the alternatives indicated above. Necessary assistance in this regard will be provided by the Ministry.

203.2.

No. NHIII/Coord/86/84

Dated the 18th March, 1985

To

All States/Union Territories
Chief Engineers

Subject : Economic Analysis for major highway projects

Economic analysis of projects are carried out with a view to examining their viability in terms of returns for the investment proposed. Such a study also helps us to choose the most economical alternative amongst various options and to priorities the same. Most of the highway projects formulated in the past were justified from technical considerations like traffic intensity, capacity, bottlenecks in smooth flow, incidence of accidents etc. and the economic analysis was made only on certain specific projects. One of the reasons for fewer economic studies on highway projects was the lack of adequate data on basic operation costs under Indian conditions.

The Road User Cost Study completed in 1983 under the aegis of the World Bank and Ministry of Shipping & Transport has filled the long-felt gap in vehicle operation data. On this basis, the IRC has published a Manual for Economic Evaluation of Highway Projects which would serve as a useful guide in carrying out economic analysis. It has now been decided that in the case of highway projects costing more than Rs 1 crore, economic analysis may be carried out and the same should form part of all such future proposals forwarded to this Ministry for approval. Action taken in this regard may please be intimated.

The Economic Analysis of certain types of schemes can also be done on the basis of a computer-based model as intimated in the Ministry's letter of even number dated 17th September, 1984.

203/2

203.4.

No. RW/NHIII/COORD/86/84

Dated the 3rd May, 1985

To

All States/Union Territories
Chief Engineers

Subject : Economic Analysis for major highway projects

A reference is invited to the Ministry's letter of even number dated 18.3.85, in which it has been suggested that economic analysis should be carried out in the case of highway projects costing more than Rs 1 crore and the same should form part of all future proposals forwarded to the Ministry for approval.

It is also possible to carry out economic analysis of important bridge works including their approaches. It is requested that economic analysis of such bridge projects may also be carried out before the proposals are forwarded to the Ministry for approval.

204 PLANNING TARGETS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
204.1. (130)	RW/NHIII/Coord/30/84 dt. 11.10.84	Fixing up Realistic Time Targets for each Project	204/1

No. RW/NHIII/COORD/30/84

Dated the 11th October, 1984

To

All Secretaries (P.W.D.)
dealing with National Highways
All State Chief Engineers (P.W.D.)
dealing with National Highways

Subject : Fixing up realistic time targets for each Project

The Committee on Agency System for National Highways have recommended, *inter alia*, that time targets for each work should be fixed up realistically in consultation with the State Chief Engineers, which has been accepted by the Government of India. In pursuance thereof, it is required that every Project estimate, which is to be submitted by the State Government to this Ministry for approval/sanction, must indicate the time schedule for execution of Project reckoned from the date of issue of sanction in the following manner :—

I *Pre-construction stage*

- | | |
|----------------------------|-------------------------|
| (a) Issue of NIT | — months after sanction |
| (b) Receipt of tender | — months after sanction |
| (c) Finalisation of tender | — months after sanction |
| (d) Award of work | — months after sanction |

II *Construction stage*

- | | |
|---|-------------------------------------|
| (a) Commencement of work | — months after sanction |
| (b) Time required for completion of the Project | — months after commencement of work |

It may kindly be noted that this information will be a pre-requisite for sanction of an estimate.

In addition in respect of Project estimates costing Rs 1 crore and above, as per Ministry's earlier guidelines, CPM charts must also be attached.

205 PLANNING TECHNIQUES

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
205.1	NHIII/Misc/129/74 dt. 12.7.74	Application for Network Techniques for Road Construction Projects	205/1
205.2	NHIII/Misc/129/74 dt. 9.6.76	—do—	205/3
205.3	NHIII/Misc/23/77 dt. 22.3.77	Application of Network Techniques (CPM/PERT Charts) on Road and Bridge Construction Projects Financed from Central Funds	205/3

Letter No. NHIII/Misc/129/74, dated the 12th July, 1974 from the Director General (Road Development) Ministry of Shipping & Transport (Roads Wings), New Delhi to all State Governments dealing with Roads

Subject : Application of Network Techniques for Roads construction projects

The need for applying Network Technique for proper management of road construction projects has been receiving the attention of this Ministry for some time. On the basis of detailed studies carried out, it has been concluded that the desirable size for a project should be for a length of 30 kms. On this basis, a network for various activities involved right from the conception of the project to the stage of completion has been prepared and is enclosed together with a covering note. The State Governments are requested to communicate their views on these immediately and in any case within a couple of weeks.

NOTE ON THE 'APPLICATION OF NETWORK TECHNIQUE' TO PLANNING AND PROGRAMMING OF HIGHWAY CONSTRUCTION.

1. GENERAL

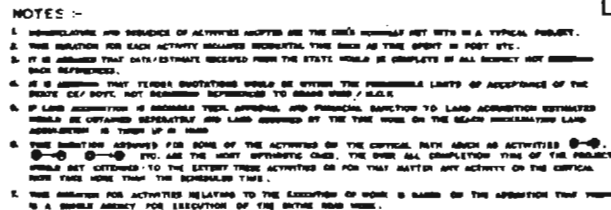
- 1.1. The field of highway planning and construction has become complex and sophisticated with the increasing emphasis on quality of travel and the demand for speedy safe transportation. A typical highway scheme involves many engineering and technical skills in design, deployment of machinery and programming of construction functions. These technical aspects must be dovetailed with the numerous administrative matters ranging from obtaining approval to allocation of funds. During execution of a road or bridge project, expensive machines are being used.
- 1.2. Restraints of season, availability of resources multiplicity of contractors and peculiar site conditions are some of the vital factors affecting a highway project. Without careful programming, speedy execution of these projects with the optimum utilisation of machines, material and manpower is well nigh impossible.
- 1.3. Without a programme, the construction manager will not be in a position to know when certain interdependent or independent work should be started. The result is that co-ordination of various activities is not possible and there will be no control either on the completion date, funds or materials.

2. VIABLE LENGTH OF A ROAD PROJECT

- 2.1. On National Highways, mostly improvement programmes in the nature of upgrading, single lane to two lanes are being tackled presently. The improvement scheme envisaged above include inter alia widening formation, realignments, improvements to junctions etc. An attempt has been made to arrive at the length of a project involving all the improvement described above, which will facilitate systematic execution and would ensure full utilisation of machinery deployed on the work.
- 2.2. Of the expensive machines used in road construction, bituminous hot mix plants, complementary items, rank amongst the foremost. The usage charge of a hot mix plant is of the order of Rs. 300/- hour. Once the machine is put into operation, continuous mixing and discharge of mix should be ensured. Even if mix is not prepared inside the plant, the machine will have to run idle in order to have temperature control. It is thus seen that in a highway project involving strengthening of pavement with B.M. a hot mix plant more or less controls the programming of construction. Judging from its output and the command distance, it has been found that a length of 30 km. would be the ideal unit for such project. This length, could be paved in one working season of the year. With this as the base, the other construction activities have been suitably phased taking into consideration the working seasons available and utilising all the machines like road rollers and tippers to the full extent. According to the programme thus drawn a length of 30 km of improvements is proposed to be completed in a period of 20 months. The activities have been so phased that once a particular activity has been completed in a length of 30 km. the machinery pertaining to that activity would move to the next project of the same length and start working. Thus, care has been taken to continue the work smoothly in lengths of 30 km, without any idling of machines. This work of 30 km could be handled by a construction division supported by two-sub-divisions.

3. NETWORK ANALYSIS FOR THE TYPICAL HIGHWAY PROJECT

- 3.1. Although the Network Techniques have not been widely employed in our road construction programmes, it merits consideration as it has been found world-wide appreciation and projects in developed countries are managed through this method with consequent saving in time, cost and material. That technique refers to programming of a project with schematic diagram that depicts the sequencing as well as inter-relationship between component parts of a project. With this method, it is possible to determine what operations actually control completion dates. Thus it is possible to give principal attention to these controlling operations. Such activities are termed critical and the 'critical path' represents the sequential chain of activities which connects the start and completion of the project and whose summated duration form the largest time path through the project. Construction planning by Network, Technique, is however, not a magic method of precise forecasting. But it does certainly compel and planned schedule of work to be done in a clear perspective and it focusses the attention of various critical and non-critical paths, thereby enabling management to take suitable measures on all areas of criticality.
- 3.2. With the above background, a network has been prepared for the optimum size of the project arrived earlier. All the main items of highway construction have been brought on the network and critical path has been shown with thick lines. The coordination of activities between the State PWD, the Ministry of Shipping and Transport (Roads Wing) and the Ministry of Finance have been borne in mind and the network based on the Fragnet concept has been adopted for the project. It will be seen therefrom that activities such as surveys and investigations, preparation of project and sanction at the preliminary stage and activities such as Earthwork, W.B.M. and bituminous courses on the execution stage are the critical activities and hence, call for principal attention.
- 3.3. It will be seen from the enclosed network that the work of "laying blacktopping" (Event No. 39 to 40) is intended to be completed in eight months. As the bituminous work cannot be done during the monsoon period, the same should start



WIDENING & STRENGTHENING 30km OF NATIONAL HIGHWAY

No. NHIII/Misc/129/74

Dated the 9th June, 1976

To

All Secretaries of the State
P.W.D.s, dealing with roads

Subject : Application of Network Techniques on Road Construction Projects

Please refer to the Ministry's letter of **even number** dated the 12th July, 1974 forwarding a note about the "Application of Network Techniques to Planning and Programming of Highway Construction" for your views.

2. Some of the States have expressed the following difficulties in this respect :
 - (i) Inadequate length of the sanctioned projects;
 - (ii) Non-applicability of Network Technique since the works are split up horizontally and vertically to utilise smaller contractors and local cooperatives;
 - (iii) Allotment of inadequate funds;
 - (iv) Unreliability as regards timely supply of materials; and
 - (v) Lack of trained people.
3. These difficulties are appreciated. However, it is felt that a beginning in the application of Network Techniques could still be made on some of the major projects. Our aforesaid letter mentioned that the optimal length of a blacktopping project for this purpose will be about 30 km where a project of this size stands already sanctioned even though in pieces, the State Public Works Department could examine whether for purpose of award of contract, the sub sections could not be clubbed into a single lot for more economic use of plant and machinery. If feasible, this should be done and the Network Methodology adopted. For future, it is proposed that estimates of a few major works (e.g. byepasses or approaches to major bridges) may be framed for requisite length so that Network Techniques could be utilised and a scientific time-bound programme established. This will ensure proper coordinated planning and gradually the Network Techniques could be availed of on other jobs as well.
4. The preparation and follow up of network Methodology does not require very specialised training. The Indian Roads Congress Special Publication No. 14 "A Manual for the Application of Critical Path Method to Highway Projects in India" (available on payment from the Indian Roads Congress, Jamnagar House, New Delhi. 11), is a comprehensive booklet and contains sufficient guidance. If it becomes necessary, however, a reference could be made to this Ministry. However the states may consider, deputing their Executive Engineers and Assistant Engineers to special courses on "Network technique" run every year by "Indian Institute of Public Administration, Indra prastha Estate, New Delhi.
5. It is hoped that it will be possible to make a beginning in this respect very shortly. For projects where it is found practicable to adopt this technique, it is requested that a copy of the C.P.M. charts prepared may please be sent to the Ministry as well as to the Regional Offices/Engineer Liaison Officer concerned for purposes reference, record and monitoring.

No. NHIII/Misc/23/77

Dated the 22nd March, 1977

To

All Secretaries of the State P.W.Ds.,
(dealing with Roads)

Subject : Application of Network Techniques (CPM/PERT Charts) on Road and Bridge construction projects financed from Central funds

I am directed to refer to this Ministry's letter No. NHIII/Misc/129/74, dated the 9th June, 1976 on the subject mentioned above and to say that the matter has been further considered and it is felt that for exercising adequate control on road/bridge construction projects financed from Central funds it may be necessary to adhere to the requirement of PERT/CPM Charts. In order that the above requirement is duly implemented, the following suggestions are under consideration :—

- (i) To make a beginning, it is felt that the requirement of CPM/PERT Charts will be made **mandatory**, in respect of Centrally financed road/bridge works each costing Rs 1 crore or more. Later on, with the increased knowledge and experience

of application of such Network Techniques on road/bridge construction projects, it may be possible to consider their application even on works costing Rs 50 lakhs or so.

- (ii) In order that the requirement at (i) above is duly implemented, it is felt that the *N.I.T. documents for all such works shall make specific provisions for the contracting firm to furnish a complete CPM/PERT Chart considering all activities right from the award of the work to its completion. This Chart shall be furnished by the firm and got approved of by the Department, latest within one month of the award of work and shall invariably form part of the contract agreement.* In order to ensure that this requirement is not over looked, the N.I.T. should make a specific provision that in case the contracting firm fails to abide by this condition to submit the chart within a month as above, no payments shall be made, and the contract will be liable to be cancelled, forthwith.
- (iii) PERT/CPM Charts enclosed by the tendering firms with their bids shall be critically examined to see that they are practicable and possible to be achieved before the same are accepted. The following points should also be kept in view while scrutinising said Charts :
 - (a) The CPM/PERT Chart shall include all events and activities right from the award of work to its completion with their durations, sequence, slack, etc. in case a particular activity is not correctly represented in regard to its duration or order of occurrence or both, the same shall be got altered before accepting such a CPM/PERT Chart;
 - (b) The activities which are shown to be occurring during the monsoon period shall be such as are possible to be executed in the said period;
 - (c) The activities pertaining to approval of designs and drawing shall be carefully examined to see that these are realistic. For example, the activity relating to the approval of design of the superstructure shall not be a prerequisite for taking up the execution of well foundations. It should also be ensured that duration shown for approval of design of a component is adequate and precedes the construction activity of the said component.
 - (d) If during the course of execution of a work, revision or updating of the PERT/CPM Chart becomes necessary, the same shall be done by the contractor in consultation with the Engineer-in-Charge without altering the final target date of completion. However, specific provision should be contained in the N.I.T. to ensure that the intermediate targets, i.e. major mile stones of the work are achieved on prescribed dates and failing to do so by the contracting firm, he shall be liable to pay as compensation certain agreed amount, which should be laid down in the N.I.T. itself.

2. Since the Ministry is eager to finally consider and suggest implementing enforcing the above requirements early, it is requested that the views of the State Government on the same may please be forwarded latest by the end of April, 1977 so that thereafter the Ministry could issue a final communication to States. In case no reply is received, it shall be presumed that the proposal meets the approval of the State Government.

301 SURVEY AND INVESTIGATION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
301.1	NHII/Misc/12/75	Level Surveying for NH R&B Projects	See Code
121.2	dt. 2.7.75	-Reference to GTS Bench Marks	No. 121.2
301.2	DO No. PL-86-(1)/74-NHVI	Manual for Survey, Investigation &	301/1
	dt. 18.3.78	Preparation of Highway Projects	
301.3	NHIII/P/31/77	Survey Investigation and Project	See Code
121.2	dt. 31.5.78	Preparation of NH	No. 121.2
301.4	NHIII/P/19/81	NHs-Proper Survey & Investigation of	301/1
	dt. 4.12.81	Projects for Major Road & Bridge	
		Works	
301.5	NHIII/P/2/84	Survey and Investigation for Road/	301/1
1100	dt. 3.5.84	Bridge Projects	

D.O. No. PL-86 (1)/74-NHVI

Dated the 18th March, 1978

To

The Chief Engineers of State PWDs/UTs
dealing with roads, (By name)

Subject: Manual for Survey, Investigations and Preparation of Highway Projects

The importance of detailed surveys and investigations leading to preparation of proper highway projects needs no emphasis. Well-planned projects are economical in more than one respect, and obviate the need for unnecessary cost revisions, while ensuring that the technical requirements are fully met with.

2. The Indian Roads Congress has recently brought out a Manual for survey, investigations and preparation of highway projects, vide their Special Publication No. 19 of 1977. The Manual contains detailed guidelines for all types of highway projects and will be of considerable help to engineers responsible for the development of roads in any way.

3. The Ministry is eager that henceforth the manual should be widely utilised for preparation and presentation of highway projects, not only on National Highways but also those on the State road network. I will therefore request that officers in your department dealing with road works may kindly be made conversant with the publication of the Manual. Copies of the Manual should be procured direct from the office of the Indian Roads Congress, Jamnagar House, Shahjahan Road, New Delhi-110 011. The field officers should be asked to have sufficient copies so that even the subordinate staff engaged in survey work have access to the publication.

4. I will be grateful if action taken in the matter is intimated to us.

No. NHIII/P/19/81

Dated the 4th December, 1981

To

All State Chief Engineers
dealing with National Highways

Subject: National Highways — Proper Survey & Investigation of Projects for major road and bridge works

During the discussions on 26th September, 1981 in the meeting of Transport Development Council, it was pointed out that quite a few projects pertaining to National Highways get delayed due to lack of proper initial survey and investigation. The Director General (Road Development) mentioned during the discussions that a special provision has been made for sanction of survey and investigation estimates in the current Plan (1980-85) so that such survey and investigation get completed well ahead of the start of the project and the estimates framed are more realistic.

2. In this connection, I am to draw your attention to the D.O. letter No. RW-NHIII/Misc/41/81 dated the 14th August, 1981 from the Director General (Road Development) to all State Chief Engineers by name. It is now requested that urgent action may be taken to identify major road and bridge works from amongst those included in the 6th Plan (1980-85) for which survey and investigation is considered necessary and the requisite survey estimates may be sent to this Ministry immediately for sanction on priority basis.

No. NHIII/P/2/84

Dated the 3rd May 1984

To

The Secretaries of all State Governments
(Departments dealing with National Highways)

Subject: Survey and Investigations for Road/Bridge Projects

The Government of India appointed a High Powered Committee in February, 1982 to review the functioning of present Agency System pertaining to execution of National Highway Works and has recom-

mended the measures for ensuring more efficient functioning of this system. The said recommendations have been accepted by this Ministry and a copy of the same has been forwarded to all Public Works Departments and other concerned agencies for information and necessary action.

2. Inadequate survey and investigation is one of the main reasons identified for cost and time overruns. The Committee's recommendations in this regard are as under :—

“The Ministry should define the precise scope of survey and investigations for each road or bridge projects and insist that they are carried out to its satisfaction before it issues the relevant sanction. In case where a State does not have the requisite expertise to carry out such investigations, the Ministry should at its discretion get them carried out through any other suitable Agency”.

3.1 For ensuring availability of required data for preparation of the road projects in a precise manner, this Ministry has issued circulars numbers NHI-37 (2)/170 dated 2.4.1970, NHIII/Misc/178/73 dated 16.11.1974, NHIII/P/31/77 dated 30.1.77. Besides Indian Roads Congress Special Publication No. 19 of 1977. Manual for survey, investigation and preparation of Road Projects, is also available.

3.2 The requirements regarding the basic design data to be collected for a bridge project may be found in Ministry's letter No. PL-2 (1)/70 dated 18.1.71. Besides this, references may also be made to IRC : 5-1970, IRC : 78-1983 and Ministry of Shipping & Transport (Roads Wing) Specifications for Road and Bridge Works.

4. For major projects, separate estimates for survey and investigations can be got sanctioned by the Ministry in respect of the works provided in the plan. Greater emphasis is now placed on the quality of the projects and hence the States should have the requisite infrastructure to carry out the detailed investigations and survey in case of all major projects. This requirement is equally important in respect of the minor works also.

5. It is therefore, requested that steps to create necessary infrastructure may please be taken in this regard and a list of the major works included in the plans needing advance action may be forwarded for consideration as and when required.

302 GEOMETRIC DESIGN

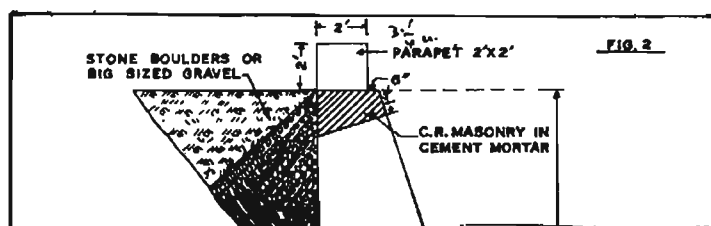
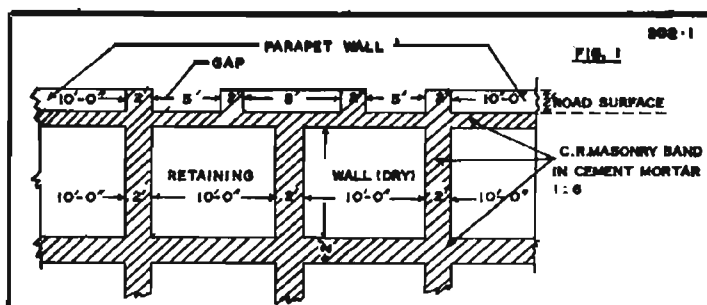
<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
302.1	Standards dt. 29.2.60	Standards to be adopted for Hill Roads	302/1
302.2 121.2	NH1-37 (2)/70 dt. 2.4.70	Plan for Development of National Highways	See Code No. 121.2
302.3 121.2	NH-40 (3)/71 dt. 29.1.71	Siting of Bridges and fixation of Alignment of Approaches	See Code No. 121.2
302.4	PL-67 (12)/76 dt. 10.9.76	Fixation of grade line for new roads/ section of existing roads proposed to be raised	302/3
302.5	PL-67 (5)/76-NHVI dt. 31.5.77	Camber for Road Surface for NHs in Rural Location	302/3
302.6 500	NHIII/P/35/77 dt. 24.12.77	Ensuring fluent grade lines at Culverts on NHs	302/4
302.7 150	PL-30 (20)/77 dt. 21.2.78	Gradients for approaches to Railway Overbridges on NHs	See Code No. 150
302.8 305	NHII/Misc/37/76 dt. 5.10.78	Provision of Hard Shoulders on both sides of Carriageway on the Approaches of Overbridges	302/4
302.9	PL-30 (68)/82 dt. 10.5.84	Geometric Designs Standards of Expressways	
302.10	PL-30 (49)/79 dt. 25.7.84	Design of Inter-sections	
302.11	PL-30 (68)/82 dt. 26.7.84	Geometric Design Standards for NH World Bank Projects	
302.12 143.2	PL-30 (49)/79 dt. 29.9.84	Provision of Junctions at the Ends of Bypasses	See Code No. 143.2

Circular dated 29.2.1960

STANDARDS TO BE ADOPTED FOR HILL ROADS

1. Alignment : Note :
***** : Not reproduced as these
2. Gradients : standards are now given
***** : in IRC : 52-1981
3. Formulation Width
4. Design of Cross-sections
 - (i) The following side slopes are adopted at cuts depending upon the type of soil

Ordinary soil including murum and hard clay	: 1 : 1 to ½ : 1
Disintegrated stuff or conglomerate	: ½ : 1 or ¼ : 1
Soft rock and shale	: ¼ : 1 to 1/8 : 1
Medium Rock	: 1/12 : 1 to 1/16 : 1
Hard Rock	: Near Vertical (or Half tunnelling if the height of cut exceeds 25 ft)
 - (ii) Gully cuttings (double side cuts) upto a height of 30 ft to 40 ft. are generally permitted for short lengths.
 - (iii) When the slope of the hillside is less than 30°, the formation is taken partly in cutting and partly in filling:
 - (iv) When the slope of the hillside is steeper than 30° but less than 60°, the formation is taken entirely in cutting or partly in cutting and partly in filling, the filling being retained by a retaining wall, consistent with the considerations of economy and with the object of straightening the road alignment over the minor warpings of the hill face.
5. Retaining walls
 - (i) The design of the retaining walls should be as per the sketch given below :



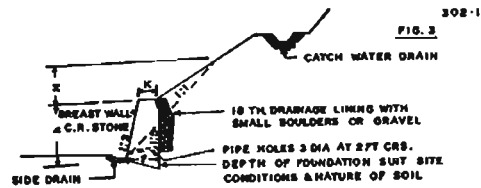
- (ii) The masonry, both dry and pucca, should be in hammer dressed coarse rubble.
- (iii) The rear of the retaining wall should always be vertical and necessary width obtained by a front batter only.

6. Parapet walls

The design of the parapet walls is indicated in the sketch at para 5 above.

7. Breast walls

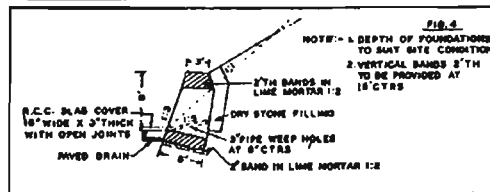
(i) Breast walls in pucca masonry should be built as per sketch and table given below :



TABLE

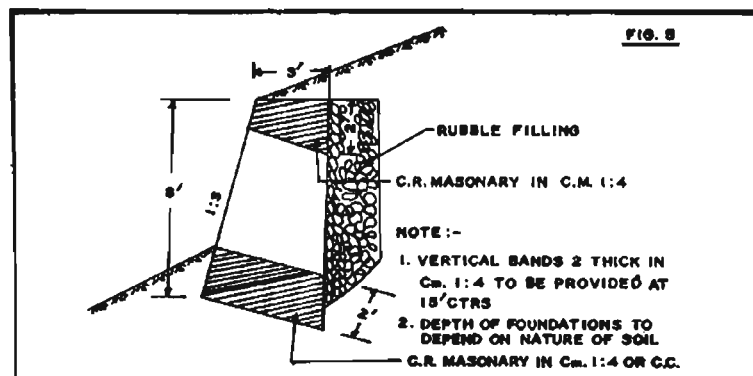
H	h 4 FT	h 6	h 8	h 10	h 12	h 14	h 16	h 18	h 20										
(FT)	KUFT	K	F	K	F	K	F	K	F										
0-6	2-00	2-75	2-0	3-25	2-00	3-75	2-00	4-25	3-00	5-25	2-25	6-00	2-5	6-5	7-50	3-00	8-25	3-00	9-25
6-10	2-00	4-75	2-00	3-25	2-00	3-75	2-00	4-25	2-25	5-25	2-25	6-00	2-5	6-5	7-50	3-00	8-25	3-00	9-25
10-15	2-00	6-75	2-00	3-25	2-00	3-75	2-25	4-50	2-50	5-25	2-50	6-25	3-0	7-0	3-5	8-00	3-75	8-75	7-00
15-20	2-00	8-75	2-00	3-25	2-25	4-00	2-50	4-75	3-75	5-50	3-00	6-50	3-25	7-25	3-5	8-50	4-00	9-25	8-25
20-25	2-00	10-75	2-00	3-50	2-25	4-25	2-50	4-75	4-00	6-25	3-50	7-25	7-50	4-0	8-50	4-25	9-50	9-50	9-50

(ii) If built of dry masonry with pucca bands, the following section is recommended :



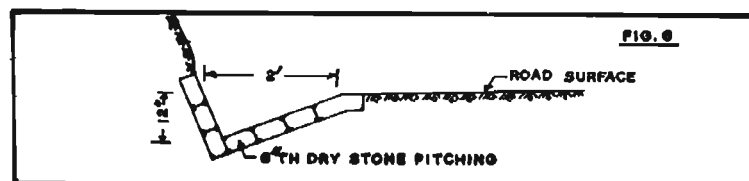
8. Check walls

Stout check walls required for the stability of slipping hill face should conform to the following section.



9. Side drains

(i) Side drains of the following section are to be built by the hill side of the formation.



(ii) The stone lining may be omitted at places where the natural formation is rocky. Where the formation consists of loose and slushy material, a layer of shingle or quarry rubbish should be laid under the stone lining.

10. *Cross drainage works*
- (i) Where there is no provision for the construction of permanent cross drainage works, dry stone scuppers and timber culverts should be built at nallah, crossings. The minimum ventway should be 2'-6".
 - (ii) Where there is provision for permanent C.D. works, hume pipe culverts, R.C.C. slab culverts or masonry arch culverts should be built. The minimum dimensions of the opening should preferably be 3'-0".
 - (iii) In high hills, all C.D. works, temporary and permanent should be provided with an adequate-sized catchpit at the upstream end of the structure.
11. *Road Crust* : (Not reproduced. Refer to IRC : 52-1981 for extra width at curves)
12. *Hair-pin-bends* : These may be designed as under (Not reproduced, refer to IRC 52-1981)

302.4.

No. PL-67 (12)/76

Dated the 10th September, 1976

To

The Chief Engineers Addl. Chief Engineers of State PWDs and
Union Territories (Dealing with National Highways).

Subject : Fixation of grade-line for new roads/sections of existing roads proposed to be raised

An important consideration in the design of new roads, or the raising of existing sections due to submergence, is the fixation of grade-line with reference to HFL or the water table. Present instructions of the Ministry contained in circular letter No. NH-1-36 (2)/70 dated the 2nd April, 1970, are that the subgrade should be kept at least 2 ft. above the HFL, and in the case of water-logged conditions, due consideration should be given to the raising of formation to a suitable level above the subsoil water level as well or adoption of other recommended measures against water-logging.

2. Since National Highways occupy a key position in the country's road network, and it is desirable to keep these open to traffic with least disruption, in modification of the earlier instructions, it has now been decided that the subgrade level on new roads or sections proposed to be raised should be kept at least one metre above the HFL. Where waterlogging conditions apply, after careful examination of the involved factors, the embankment should be raised to a suitable level above the water table as well, and other measures such as deep drains/capillary cutoffs adopted on the lines of IRC : 34-1970 "Recommendations for Road Construction in Water-logged Areas" so that the subgrade is not saturated due to capillary action.

3. In fixing the design HFL, care should be given to the possible rise in water level due to such factors as the embankment of the road itself, constriction of the waterway at bridges, and gradual accretion of water levels because of siltation of the drainage courses. Where submersible section of an existing road is to be raised, additional cross-drainage facilities should be provided, as required, so that cross flow of flood waters is ensured without any heading up.

4. In general, when raising proposals are formulated, effect on adjoining section of the highway should also be simultaneously considered. It will be advisable to frame an integrated plan for a stretch of reasonable length than devising piecemeal proposals for short sections.

5. It is requested that these instructions may please be brought to notice of all officers in your department dealing with National Highways.

302.5.

No. PL-67 (5)/76-NHVI

Dated the 31st May, 1977

To

All the Chief Engineers of
States and Union Territories

Subject : Camber for Road Surfaces for National Highways in Rural Location

The standards for camber for different types of road surfaces have been reviewed in this Ministry keeping in view the replies received from the State Chief Engineers in response to Ministry's letter of even number dated the 17th May, 1976. In this connection, the recommendations of the Bituminous Pavements Committee of the Indian Roads Congress have also been considered. It is now suggested that the following values for camber may be adopted for National Highway works :

Sl. No.	Type of road surface	Camber in percentage	
		Annual Rainfall 100 cm and above	Annual Rainfall below 100 cm
1	2	3	4
1.	High Type pavement :		
	(a) Bituminous construction, e.g. asphaltic concrete	2.5	2.0
	(b) Plain and reinforced cement concrete	2.0	2.0
2.	Thin premix carpet and surface dressing	2.75 (1 in 36)	2.5
3.	W.B.M. and gravel	4.0	3.0
4.	Shoulders :		
	(a) Unturfed	4.0	4.0
	(b) Turfed	5.0	5.0

In case any Chief Engineer has a difference of opinion, he may let this Ministry know the reason for his disagreement.

302.6.
500

No. NHIII/P/35/77

Dated the 24th December, 1977

To

The Chief Engineers of all State P.W.Ds. &
Union Territories (dealing with Roads).

Subject : Ensuring fluent grades lines at culverts on National Highways

Your attention is invited to this Ministry's Circular letter No. NHI-37 (2)/70 dated the 2nd April, 1970 with which the points to be specially kept in view during investigations and preparations of detailed estimates for improvements to the different National Highways, were communicated. It was *inter alia* impressed therein that "where culverts occur on a gradient or horizontal curve, their top levels should be so fixed that the culverts fit in with the profile of the flanking portions of the road and there is no resulting hump". This has been reiterated in this Ministry's Circular No. NHI-41 (18)/70, dated the 12th August, 1970 wherein *inter alia* the following points have been highlighted.

- (i) The culvert deck should follow the same profile as that of the flanking road sections, without any break, whether the same is in level, grade or in a curve. In cases where it is essential to have the culvert deck higher than the adjoining road levels, suitable vertical curves should be provided.
- (ii) At locations where the culverts lie on horizontal curves, necessary super-elevation in the road should be provided by laying the deck slab of the culvert to the required cross slope.
- (iii) The camber to be provided over the culvert deck should conform to the camber of the flanking road sections. For achieving this, the deck slab should be laid to the required camber and grade, and the bed blocks laid to suit.

302.8.
305

No. NHII/Misc/37/76

Dated the 5th October, 1978

To

All the Chief Engineers
dealing with Roads

Subject : Provision of hard shoulders on both sides carriageway on the approaches of overbridges

A question has been raised whether the approaches to overbridges should have a pavement extended and blacktopped for the full width of roadway to prevent erosion of otherwise unprotected earthen shoulders and of the slopes of the embankment and consequent occurrence of accidents.

2. After careful consideration, it has been decided that one metre wide hard shoulders can be provided on both the sides of the carriageway. The composition of the hard shoulders will consist of two layers of water bound macadam each of 75 mm thick with single coat surface dressing. The remaining portions of the shoulders and the embankment slopes shall be turfed to prevent the erosion of the same. The hard shoulders, however, shall be distinct and distinguishable from the main carriageway either by providing solid yellow stripes along the edge of the pavement or providing contrast by surface treatment using coloured aggregates or making the surface texture coarse so as to discourage its use as a traffic lane.

302.9.

DATED the 10th MAY 1984

D.O. NO. RW/PL-30(68)/82 ADDRESSED TO SHRI D.P. GHOSH, CHIEF ENGINEER (N.H.), P.W. (ROAD DIRECTORATE CALCUTTA, SHRI H.M. SHAH CHIEF ENGINEER (N.H.), PWD., GANDHINAGAR

Kindly refer to the demi-official letter of even No. dated 20th January 1984 from the Director General (Road Development) and Addl. Secretary addressed to the Secretary of the State Govt. and copy endorsed to you regarding road and bridge projects proposed under the World Bank Aid. This was followed by demi-official letter of even No. dated 1st Feb., 1984 wherein you were requested to furnish alignment proposals and the estimate for land acquisition, wherever necessary. I hope suitable action has been taken by you in this regard.

I now enclose the proposed geometric standards and cross section of expressway for guidance in the project preparation work.

A BRIEF NOTE ON EXPRESSWAYS

An Expressway is a divided arterial Highway intended for through traffic with full control of access and generally provided with grade separations at intersections. No slow moving traffic or pedestrians will be permitted on Expressways.

The grade separations may be provided with or without interchanges, depending upon the importance of the cross-road. The need for interchanges shall be established after careful study of traffic flow.

Interchanges are of several types such as :—

- Trumpet Interchange
- Y — Interchange
- Diamond Interchange
- Clover leaf Interchange
- Directional Interchange
- Rotary Interchange

The selection of a particular type should be carefully done after traffic surveys.

GEOMETRIC DESIGN STANDARDS OF EXPRESSWAY (Flat Terrain)

1.	Design speed (KPH)	: 120
2.	Land Width (Metres)	: 90 — extra to be provided where warranted
3.	Building lines (Metres)	: 10 metres beyond Right of Way
4.	Roadway width (Metres)	
	— For 4 lane divided carriageway	: 27
	— For 6 lane divided carriageway	: 34
	— On culverts	: Same as for road section.
5.	Carriageway Width (Metres)	
	— 4 lane divided carriageway	: 2 × 7.5
	— 6 lane divided carriageway	: 2 × 11
6.	Shoulder width (Metres)	
	— Treated shoulder	: 2.5
	— Untreated shoulder	: 1.0
	— Total width	: 3.5
7.	Median width (Metres)	: 6
8.	Camber (per cent)	
	— Carriageway	: 2.5
	— Treated shoulder	: 3.0
	— Untreated earth shoulder	: 4.0

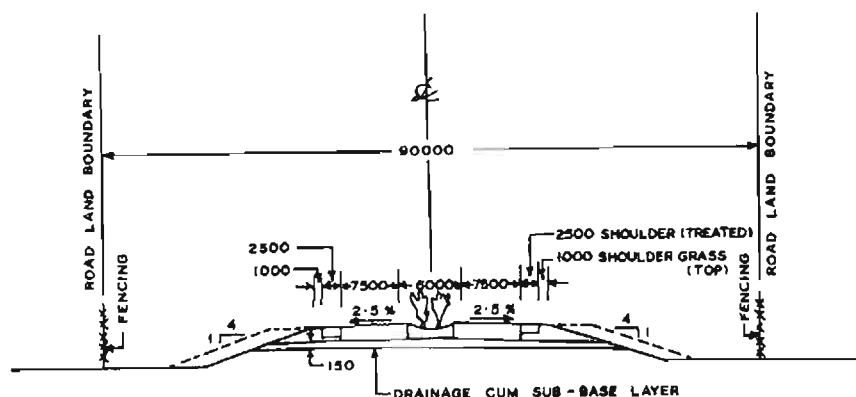
9. Sight Distance (Metres)
- Safe stopping sight distance (Minimum) : 250
 - Desirable : 500
10. Radius of horizontal curve (m) : Min : 700, Desirable 2600
(This radius requires no super-elevation & normal crown section will suffice)
11. Superelevation : As per formula
$$e = \frac{V^2}{225 R}$$

Subject to a maximum of 4%
12. General notes on Horizontal alignment :
- (i) Long tangent sections exceeding 6 km. should be avoided.
 - (ii) Broken-back curves should be avoided or at least separated by 500 metres straight length.
 - (iii) Minimum curve length should be 150 metres for 5° deflection angle and increased at the rate of 30 m for 1° decrease thereafter.
13. Length of transition curve (metres) :
$$\frac{0.0215 V^3}{CR}$$
 Where C = 0.5
V-the design speed and
R-the radius of circular curve.
14. Maximum gradient
- Ruling : 1 in 50
 - Absolute : 1 in 40
15. Summit & valley curves (metres) : To be designed for sight distance mentioned at S. No. 9 and minimum length = 0.6 V
16. Vertical profile : 1 m clearance between HFL and subgrade.
17. Clearance through road over passes : Vertical: 6 metres.
Horizontal : Same normal Section of expressway to continue.
18. Design standards for inter-change elements.
- | (i) Speed, sight distance and radius | Design speed (KPH) | Radius (m) | Stopping sight distance (m) |
|--------------------------------------|--------------------|------------|-----------------------------|
| Desirable | 80 | 230 | 130 |
| Minimum | 60 | 130 | 80 |

(The direct ramps/diagonal connections should be designed for the desirable design speed and the design speed of loops may be near the minimum)

- (ii) Maximum grade (per cent) : Desirable — 4
Absolute — 6
- (iii) Summit & valley curves (metre) : To be designed as per stopping sight distances formulae and minimum length = 0.6V
- (iv) Cross section elements :
 - a) carriageway :
Desirable — 2 lanes
Minimum — Intermediate lane
 - b) Shoulder : 2 metres each
- (v) Length of speed change lanes (m)

	Ramp/loop speed	
	80 KPH	60 KPH
Acceleration lane	300	400
Deceleration Lane	130	150



TYPICAL CROSS SECTION OF EXPRESSWAY

NOTES:— 1. ALL DIMENSIONS ARE IN MM.

2. DOTTED LINES INDICATE FUTURE EXTENSION

302.10.

No PL-30 (49)/79

Dated the 25th July, 1984

To

The Chief Engineers of all States/Union Territories dealing with roads

Subject : Design of intersections

The Ministry have been attaching great importance to the removal of deficiencies of road junctions specially on National Highways in order to ensure safety against road accidents. From time to time, Ministry have also been receiving proposals for improvement of intersections from the State PWDs. However, it is observed that in most of the cases, the data submitted with the proposal are not adequate, even though the details of data required to be furnished have been circulated to all State PWD's vide this Ministry's letter of even number dated the 28th Sept. 1981. As a consequence it is not often possible to appreciate the problem in full for evolving a proper proposal for the junction-improvement.

2. In order that the proposals can be properly appreciated, following essential data should invariably accompany all design proposals sent to the Ministry henceforth.

- (i) An index/location Plan in the scale of about 1 : 10,000 to 1 : 20,000 showing the junction under consideration and the road/rail/river network in the area.
- (ii) A base plan of the junction site in the scale of 1 : 500. It is important to maintain this scale which is being adopted as a measure of uniformity and also to ensure that sufficient length of roads and fairly detailed account of existing features are shown in a drawing sheet of manageable size. The existing roads and salient features like road land boundary, location of structures, etc. should be shown for a length of about 200 m for each road merging at the junction. If the terrain is not plain and/or there is too much of variation of ground level at the site contours at 0.5 metre interval should also be marked on the base plan.
- (iii) The peak hour design traffic data : This is MOST IMPORTANT. Without this data, the problem virtually remains undefined. The design hour peak traffic data should invariably give its compositional and the directional break-up. A sample proforma which is to be used for the purpose of reporting the compositional and directional break-up and computing the volume in PCUs for one leg of a four legged intersection is enclosed in Annexure I. Separate report sheets will be needed for the other legs of the intersection. The volume of the above traffic in terms of number of vehicles and in PCUs should then be reflected in the diagrams shown in the Annexure II & III. If the number of legs in the intersection are three or more than four, Annexure I, II & III should be suitably modified.
- (iv) Other relevant details such as the feasibility of providing proper lighting system at the intersection, the potentiality of the area in the vicinity of intersection being developed as a trade centre or transshipment points for goods, passenger traffic etc. shall be given.

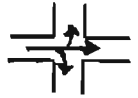
3. It is requested that necessary action may be taken on the above lines, while sending proposals for improvement of intersections to the Ministry.

ANNEXURE I

INTERSECTION DESIGN DATA

PEAK HOUR DESIGN TRAFFIC PEAK HOUR _____ HRS. TO _____ HRS.

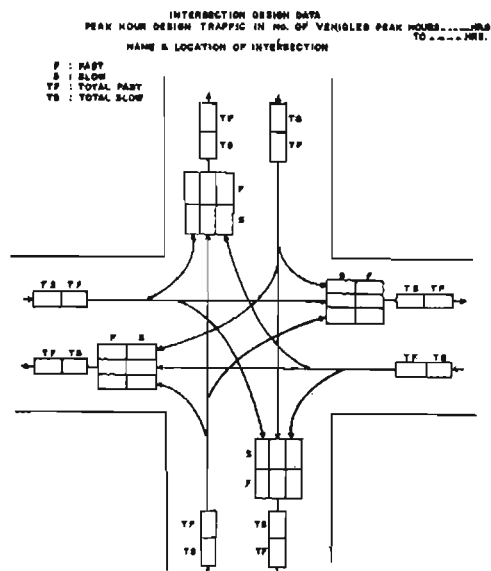
NAME & LOCATION OF INTERSECTION _____



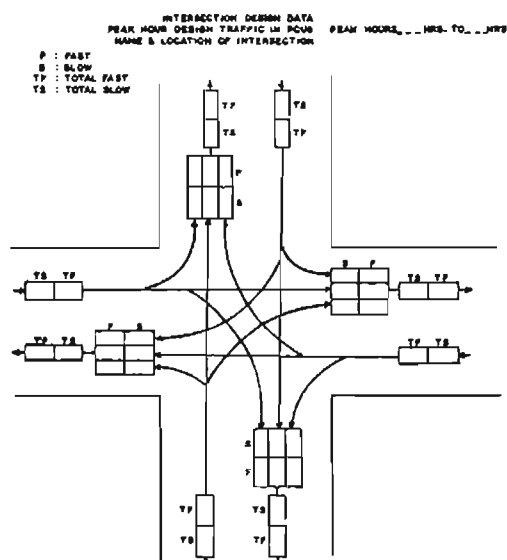
FROM		LEG A *								
ENTERING		LEG B*			LEG C*			LEG D*		REMARKS
Type	Nos	PCU Equivalency	PCU	Nos	PCU Equivalency	PCU	Nos	PCU Equivalency	PCU	
	1	2	3=1X2	1	2	3	1	2	3	
FAST	1. Passenger cars, tempos, auto rikshas, tractors	1.00								
	2. Motor cycles, Scooters	0.50								
	3. Trucks, Buses, Tractor Trailer Units	3.00								
TOTAL FAST										
SLOW	4. Cycles	0.50								
	5. Cycle Rikshas	1.50								
	6. Horse Drawn	4.00								
	7. Bullock-carts	8.00								
TOTAL SLOW										
PEDESTRIAN NOS.										

* Specify the name of an important place or land on this LEG such as Market LEG, Temple LEG, Mathura LEG etc.

ANNEXURE II



ANNEXURE III



D.O.N. PL-30(68)/82

302.11.

To

The Chief Engineers of (By name)

Dated the 26th July 1984

I hope the project preparation work in respect of schemes proposed for World Bank assistance in your State has reached an advanced stage. Clarifications are being sought from the State PWDs in regard to the geometric design standards to be adopted for these schemes and on the method of presentation of the project documents.

For the sake of uniformity and proper presentation of the project, we have evolved design standards and guidelines for presentation of the documents and the same are described in Annexures I & II respectively. I shall be grateful if these guidelines and standards are complied with in the project preparation work.

Annexure I

GEOMETRIC DESIGN STANDARDS FOR NATIONAL HIGHWAYS (RURAL SECTIONS) PROPOSED UNDER THE WORLD BANK AID.

		Ruling	Minimum
1.	Design speed (km/hr)	:	
a)	Flat terrain	100	80
b)	Rolling terrain	80	65
c)	Mountainous terrain	50	40
2.	Roadway width (metres) :		
	For 2 lane carriageway	: Flat & Rolling	12
		Mountainous	8.8
	For 4 lane divided carriageway	: Flat & Rolling	25
		Mountainous	22
	On culverts	: Same as for road section	
	Extra width may be provided for busbays where necessary		
3.	Carriageway width (metres)		
	For 2 lane carriageway	: 7	
	For 4 lane divided carriageway	: 2 × 7.5	
	Extra width may be provided for bus bays where necessary		
4.	Shoulder width (meters)		
	Flat & Rolling terrain	: Treated shoulder	1.5
		Untreated shoulder	1.0

	Mountainous terrain	:	Total width on either side of carriageway (Entire width to be treated)	2.5 0.9
5.	Median width (metres)	:		5
6.	Camber (Per cent)	:	— Median	4.0
			— carriageway	2.5
			— Treated shoulder (Blacktop)	3.0
			— Untreated (earth) shoulder	4.0
7.	Sight Distance (meters)	:		
	— Two lane roads	:	To be designed for overtaking sight distance; Intermediate or stopping sight distance may be resorted to in difficult situations.	
	— Four lane divided road	:	To be designed preferably for intermediate sight distance and in difficult situations for stopping sight distance	
8.	Radius of horizontal curves (metres)	:		
			Ruling	Minimum
	Flat terrain		360	230
	Rolling terrain		230	155
	Mountainous terrain-non snow bound		80	50
	Mountainous terrain-snow bound		90	60
9.	Maximum Superelevation (Per cent)			
	Plain & Rolling terrain		7	
	Hilly areas — snow bound		7	
	Hilly areas — Non-snow bound		10	
10.	Summit and valley curves			
	To be designed for appropriate sight distances mentioned in S. No. 7 and minimum length = .6 V			
11.	Vertical profile			
	In realigned portions, the subgrade may be fixed 1 metre above the HFL.			
12.	For all other details, the IRC publication No. 73-1980-Geometric standards for Rural (non-urban) Highways may be referred to.			

Annexure II**GUIDELINES FOR PRESENTATION OF PROJECT DOCUMENTS****1. General Presentation**

The documents for each subsection as per this Ministry's Lr. No. PL-30 (68)/80-Vol. II, dt. 18.7.84, should comprise

Part I — Project Report

Part II — Design including Material Report

Part III — Drawings

Part IV — Estimates

Wherever required, the documents may be further subdivided into various volumes under each part mentioned above.

2. Number of copies required

12 copies each of the above documents are required to be furnished to the Roads Wing.

3. Size of documents

The size of documents for all Parts except Part III should be 297 mm × 210 mm.

As regards Part III (Drawings), the sizes mentioned in IRC publication No. 19 may be followed.

303 PAVEMENT DESIGN

<i>Codc No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
303.1	PL-30 (148)/74 dt. 25.11.74	Proper Design and Construction of Flexible Pavements	303/1
303.2	NHIII/P/3/76 dt. 26.7.76	Collection and Presentaion of Soil Investigation Data for Pavement Design	303/1
<u>303.3</u> 402	NHIII/P/16/75 dt. 2.8.76	Test Values of Aggregates Intended for use in Pavement Courses on NHs	303/4
<u>303.4</u> 305	PL-17 (9)/76 dt. 20.3.81	Specifications for Construction of Roads in Expansive Soil Areas.	303/6

No. PL-30 (148)/74

Dated the 25th November, 1974

To

Chief Engineers/Additional Chief Engineers of all
State Public Works Departments and Union Territories
dealing with National Highway Works

Subject : Proper design and construction of flexible pavements

Performance of flexible pavements is closely linked with the proper design/construction of the various components layers viz. subgrade, sub-base base and surfacing. Experience in the past has been that more durable and economical pavements with trouble free service could be achieved if due attention is paid to these aspects in the initial stages based on proper study and evaluation of all the concerned factors.

2. Essential principles of the design and composition of structurally sound pavements are well known and stand embodied in the IRC standard, IRC : 37 "Guidelines for the Design of Flexible Pavements". Specification for proper construction of the different component layers are also detailed in the Ministry's "Specification for Road and Bridge Works". Quality control measures to be taken during construction are further explained in the IRC publication, "Handbook of Quality Control for Construction of Roads and Runways". It is reemphasised that the above-referred design/construction guides should be scrupulously followed on National Highway works in future. The following points may specially be kept in view :—

- (i) Starting from subgrade, each pavement course (viz. subgrade in expected critical moisture conditions, sub-base and base) should be checked to ensure that it conforms to specification requirements and has the requisite strength as designed before the same is covered over by the subsequent course;
- (ii) Materials for the different pavement courses should be chosen with due regard to availability, quality, suitability and economics, the aim being to achieve a stable and durable pavement construction;
- (iii) Provided these meet the prescribed requirements of quality, locally available cheap materials like moorum/gravel/kankar/laterite with or without processing for improvement of strength characteristic should be preferred for sub-bases to bring down the cost of construction;
- (iv) Where the choice of material for sub-base falls on stabilised soil, the mix therefor should be properly designed keeping in view the strength expected to be achieved in the field relative to the method of construction to be adopted;
- (v) In areas having stone materials within economic leads, over-size stone metal WBM has been the obvious choice for sub-base courses. Even in such cases, where there is a danger of the subgrade soil intruding into the sub-base, first a sub-base layer of granular material/stabilised soil of proper quality and strength should be provided subject to this being possible at economic cost; and
- (vi) During construction, strict control over the quality of materials and work should be exercised through quality control tests. Requisite tests are mentioned in detail in the Ministry's Specification for Road and Bridge Works as well as the Handbook of Quality Control published by the Indian Roads Congress.

3. It is requested that these points may be brought to the notice of all officers in your department engaged on National Highway works.

No. NHIII/P/3/76

Dated the 26th July, 1976

To

Chief Engineers/Additional Chief Engineers of
State PWDs and Union Territories
(dealing with roads)

Subject : Collection and presentation of soil investigation data for pavement design

Design of pavement for a new section, or for widening/strengthening of an existing stretch, is a major activity on the National Highways. *Vide* Ministry's letter No. NHI-37 (2)/70, dated the 2nd April, 1970, instructions had been issued that pavement design proposals should be based on IRC : 37-1970 "Guidelines for the Design of Flexible Pavements" and that all relevant data should invariably accompany the estimates. However, general experience has been that the required data are not enclosed with the estimates or are not collected to the requirements or are not presented in a form permitting proper appreciation of the proposals. In certain cases, this has resulted in protracted correspondence with the States causing unnecessary delays.

2. To obviate such difficulties and ensure uniform practice, a memorandum bringing out points of guidance relating to collection and presentation of soil data for pavement design is enclosed. It is requested that the contents of the memorandum may be kept in view while collecting and presenting soil data for pavement works on National Highways. It may also please be ensured that the required data in proper form invariably accompany such proposals in future.

[Enclosure to Roads Wing letter No. NHIII/P/3/76 dated the 26th July, 1976]

MEMORANDUM ON THE COLLECTION AND PRESENTATION OF SOIL INVESTIGATION DATA FOR PAVEMENT DESIGN FOR NEW ROADS/WIDENING AND STRENGTHENING EXISTING ROADS

1. General

On National Highways, flexible pavements for new sections or for widening and/or strengthening of existing stretches are to be designed in accordance with IRC : 37-1970, "Guidelines for the Design of Flexible Pavements". This publication recommends the CBR method of design and sets out guiding principles in this regard. For pavement design, among other things, soil investigation data are required to be collected. Guidelines on the collection and presentation of these data are given in the following paragraphs.

2. Collection of soil investigation data for new roads

2.1 Roads in embankment

2.1.1 Before taking up soil investigations for pavement design, it is expected that sources for embankment material are determined and demarcated in the field. These may be roadside borrow areas and/or roadway cuttings. Good engineering practice requires that the best material available from these sources be earmarked for use in the top 500 mm portion of the embankment constituting the subgrade. Directions about demarcation of borrow areas and suitability of material for use in embankment/subgrade are contained in IRC : 10-1961 "Recommended Practice for Borrowwits for Road Embankments constructed by Manual Operation" and IRC : 36-1970 "Recommended Practice for the Construction of Earth Embankments for Road Works" respectively.

2.1.2 For purposes of pavement design, the material earmarked for use in subgrade should be tested and data collected in the proforma at Annexure I. Frequency of testing should be at least two locations per km i.e. at every half kilometre of road. However, where the type of soil changes frequently, the rate of testing should be suitably stepped up at the discretion of the Engineer-in-Charge so that at least one set of test results is available for each type of soil.

2.2 Road sections in Cutting

2.2.1 Soil data for road sections in cutting should also be collected in the proforma at Annexure I. Samples for tests should be taken along the centre line of the road at an elevation corresponding to the design subgrade level of the pavement. Frequency of testing should be once every half kilometre. Where the type of soil is found to vary frequently, the rate of testing should be increased so that at least one set of test results is available for each soil type.

2.2.2 Where, both in the case of roads in embankments as also road sections in cutting, the water table in the worst condition may be high leading to water-logging conditions. In those situations while designing the pavement, the IRC Recommendations for Road Construction in Water-logged Areas vide their publication IRC:34-1970 should be referred to and given necessary consideration.

3. Collection of soil investigation data for cases involving widening and/or strengthening existing pavement

3.1 Soil data for widening and/or strengthening of existing pavements should be collected in the proforma given in Annexure 2. Data should be for samples of subgrade soil under the existing pavement at a distance of about 0.6 to 1 m from the edge of the carriageway. Similar data should be collected at the subgrade level below the flanks where the pavement is to be widened. Frequency of testing should be such that all the varying soil types are covered by the tests. An indirect indication for demarcating the extent of different soil types can be had from the performance of the existing road. For this purpose, the existing road should be broadly divided into sections having more or less similar performance and pavement composition. One set of tests should be conducted for each demarcated section subject to a minimum of one set for every half kilometre.

3.2 Besides soil data, details regarding the thickness and composition of the existing pavement should be collected in the proforma at Annexure 3, to the same frequency as for soil tests.

4. Number of CBR specimens to be tested in each set of tests

4.1 In each set of tests, at least three samples should be tested and their average given in the relevant columns of the prescribed proforma. However, where variation between samples is beyond the limits given below, the average should be based on at least six samples and not three.

CBR	Maximum variation in CBR value between samples
Up to 10	... 3
Above 10 to 30	... 5
Above 30 to 60	... 10
Above 60	... Not significant

5. Presentation of soil investigation data

5.1 The soil investigation data for pavement design should be presented in a manner permitting proper appreciation of the proposals. These should be compiled in a separate folder comprising the following parts :—

- (i) Brief note on soil data collection.
This should discuss broadly the manner of data collection and bring out clearly the deviations from the guidelines contained in this Memorandum with reasons thereof.
- (ii) Index map of the road to a suitable scale.
- (iii) Soil data in the proforma, *vide* Annexure 1 or 2 as applicable.
- (iv) Details of existing pavement (in the case of existing roads) in the proforma at Annexure 3.

Annexure 1**SOIL INVESTIGATION DATA FOR NEW ROADS**

Average annual rainfall :

State :

Route :

Section :

Date of sampling	Location		Nature of soil	Sieve analysis : % by weight passing			Sand content (col. 5-col. 7)	Atterberg limits			Max. dry density (Proctor) gm/cc	OMC %
	Km	cut/fill		4.75 mm sieve	4.25 micron sieve	75 micron sieve		LL %	PL %	PI		
1	2	3	4	5	6	7	8	9	10	11	12	13
Field dry density at subgrade level (for road in cutting) gm/cc			**CBR of remoulded soil sample of Proctor density and OMC or at field density and moisture content			CBR of soil sample remoulded as in col. 15 and soaked in water for 4 days		Depth of water table below subgrade under worst conditions metre			Remarks	
14			15			16		17			18	

Note : **For road in cutting where the field density at subgrade level is 95% Proctor or more, the moulding density and moisture content should be the same as those existing in the field. However, where the field density is less than 95% Proctor, the subgrade would require to be recompacted for 500 mm thickness to Proctor density and as such the moulding condition should be Proctor density and OMC.

Annexure 2**SOIL INVESTIGATION DATA FOR WIDENING/STRENGTHENING EXISTING ROADS**

Average annual rainfall :

State :

Type of work involved : *Strengthening widening and strengthening widening*

Route :

Section :

Date of sampling	Location		Nature of soil	Sieve analysis : % by weight passing			Sand content (col. 5-col. 7) %	Atterberg limits			Moisture content	
	Km	Under pavement or flank		4.75 mm sieve	4.25 micron sieve	75 micron sieve		LL %	PL %	PI	Worst field moisture %	OMC %
1	2	3	4	5	6	7	8	9	10	11	12	13
Dry density		CBR of remoulded soil sample at Proctor density and OMC	CBR of remoulded soil sample at Proctor density after 4 day soaking	**CBR of remoulded soil sample at field density and worst field moisture content	Depth of water table below subgrade under worst conditions metre	Riding quality Good/Fair/Poor V. poor	Remarks					
Field gm/cc	Proctor gm/cc											
14	15	16	17	18	19	20	21					

** Column 18 applies only to samples from below the existing pavement.

DETAILS OF EXISTING PAVEMENT

State :
Route :
Section :

Location km	Pavement		Details of Road Crust								Remarks
	Width m	Type BT/CC/ WBM etc	Sub-base			Base			Surfacing		
			Material	Thick- ness mm	Soaked** CBR %	Material	Thick- ness mm	Material	Thick- ness mm	Total thickness	
1	2	3	4	5	6	7	8	9	10	11	12

Note : **This test should be conducted if the material is of stabilised soil/granular material like moorum, gravel etc. Samples should be remoulded at field density and moisture content and tested after four day soaking.

303.3

402

No. NHIII/P/16/75

Dated the 2nd August, 1976

To

The Chief Engineers and Addl. Chief Engineers of State PWDs and
Union Territories dealing with National Highways

Subject : Test values of aggregates intended for use in pavement courses on National Highways

Before selecting aggregates for use in pavement courses, it is necessary to check their suitability with respect to the prescribed physical and other characteristics **requirements** in this regard as laid down in the Ministry's "Specification for Road and Bridge Works" and the various Indian Roads Congress standards. However it is noted that test values of aggregates intended to be used are generally not supplied when forwarding the estimates for pavement courses. It is requested that this may be done in future.

2. The tests to be conducted and the manner of presenting the results are indicated in forms attached. Form 1 is for aggregates like stone metal while Form 2 is for naturally occurring soil-gravel/moorum mixtures. At least three specimens should be tested for each type of material from any source. Samples for the tests should be representative of the material to be used and collected in accordance with the procedure set forth in IS : 2430.
3. To obviate unnecessary correspondence in respect of works on National Highways involving pavement construction/strengthening, it may please be **ensured** that estimates for these are invariably accompanied by record of test results in Form 1 and or 2 as applicable.
4. The contents of this circular may kindly be brought to the notice of all officers of your department engaged on National Highway works.

FORM 1

RECORD OF TEST VALUES OF AGGREGATES LIKE STONE METAL ETC

State : _____

District : _____

Date of testing : _____

Location and name of quarry if any (correlated with index map.)	Type of Rock (General Group Classification or trade name)	Specimen No.	** Los Angeles Abrasion Value (IS : 2386-Part IV)	** Aggregate Impact Value		Water absorption (IS : 2386 Part III)	*** Flakiness Index (IS : 2386 value Part I		Stripping (IS : 6241)
				Dry test (IS : 2386-Part IV)	Wet Test (IS : 5640)		Nomi- nal size 40 mm.	Nomi- nal size 20 mm.	
1	2	3	4	5	6	7	8	9	10
		1. 2. 3. Average							
Remarks regarding performance of the aggregate wherever a systematic evaluation has been made						Additional remarks like old/new quarry, approximate quantity available existing access to quarry etc.			
11						12			

- Note :** ** For hard aggregates like stone metal any one of the two tests given in columns 4 and 5 may be conducted. Wet test in column 6 has to be done in the case of soft aggregates like laterite, kankar, brick metal etc.
- ** Not required to be carried out for soft aggregates like laterite, kankar, brick metal etc.
- *** To be performed only when the material is to be used in bituminous constructions.

FORM 2

RECORD OF TEST VALUES OF NATURALLY OCCURRING SOIL - GRAVEL/MOORUM MIXTURES

State : _____

District : _____

Date of testing : _____

Location and name of quarry if any (correlated with index map)	General description of the material	Specimen No.	Gradation : Per cent by weight passing the sieve (IS : 2720 — Part IV)								Atterberg Limits (IS : 2720 — Part V)		
			80 mm	40 mm	20 mm	10 mm	4.75 mm	2.36 mm	600 micron	75 micron	LL	P.L	F.I
			4	5	6	7	8	9	10	11	12	13	14
		1. 2. 3. Average											
Proctor Test (IS : 2720 — Part VII)			C.B.R.*** Value			Additional Remarks like new/old quarry approximate quantity available, existing access to quarry etc							
Density			O.M.C.										
15			16			17			18				

- Note :** *** Tested in accordance with IS : 2720 — Part XVI on samples prepared at Proctor density and O.M.C., and soaked in water for 4 days.

No. PL-17 (9) 76

Dated the 20th March, 1981

To

The Chief Engineers dealing with Roads of
All the States/Union Territories

Subject : Interim Technial Memorandum on the Specifications for construction of roads and embankments in expansive soil areas

The Ministry has launched a research scheme designated R-9 for development of specifications for construction of roads in expansive clay areas. The results of the study are expected to be available after a period of 3 years. Meanwhile, these interim guidelines are circulated for the guidance of engineers engaged in the construction of roads in expansive soil areas.

INTERIM TECHNICAL MEMORANDUM ON THE SPECIFICATIONS FOR CONSTRUCTION OF ROADS IN EXPANSIVE SOIL AREAS

1. Introduction

- 1.1. Expansive soils commonly known as black cotton soils are spread over an area of about 300,000 sq. km. in India. They are predominantly found in the States of Andhra Pradesh, Karnataka, Gujarat, Madhya Pradesh, Maharashtra and Tamil Nadu. These soils are formed from the reathering of igneous and metamorphic rocks. They contain montmorillonite and other secondary minerals which give rise to the expansive and shrinkage properties, which are peculiar to the B.C. Soils.
- 1.2. Experience on highway construction in these areas has often been unsatisfactory both economy and performance-wise. This may be due to the lack of understanding with regard to the identification, properties, awareness of the problems associated with the expansive soil and the measures to tackle the same. The object of this memorandum is to bring out all relevant points with regard to the construction of roads and embankments in expansive soil areas leading to recommendations which would serve as tentative guidelins to the practising engineers.

2. Identifications

- 2.1. The identification of expansive soil depends on the fundamental properties like Atterberg's limits, percentage clay fraction (Activity), free swell, max. dry density O.M.C. relationship, etc. The table below gives physical properties of expansive soils.

Liquid Limit	53.0 - 90.0 (%)
Plastic Limit	26.0 - 50.0 (%)
P.I.	18.0 - 53.0
Shrinkage Limit	7.0 - 13.0 (%)
Sp. gravity	2.7 - 2.9
Clay content	32.0 - 70.0 (%)
Silt content	17.0 - 43.0 (%)
Sand content	1.0 - 26.0 (%)
Gravel content	0.0 - 8.0 (%)
Dry density (standard Proctor)	1.30 - 1.35 gm/cm ³
O.M.C.	25.0 - 35.0 (%)
Swell pressure at a dry density of 1.3 gm/cc under no volume change condition	0.5 - 10 kg/cm ²

- 2.2. In order to know whether a soil is of expansive type, the following procedure may be adopted. About 100 gms dry soil is placed in a 200 c.c. graduated jar and its volume is noted. Then 100 c.c. of distilled water is added to it and they are vigorously mixed by closing the open end with the palm and shaking the mixture up and down. Then it is allowed to rest for about 24-48 hours and the volume occupied by the soil is noted. If there is 50% or more increase over the initial volume, the soil may be considered as expansive. For all practical purposes, this procedure should lead to reasonable identification of swelling clays.

3. Basic Data

- 3.1. If the soil in the area where the road is to be constructed is identified as expansive soil, the following basic data should be collected.
 - (i) Depth of water table and its fluctuation over the year;
 - (ii) Engineering properties of the soil (Atterberg) Limits, laboratory soaked, CBR, optimum moisture content and Proctor density),
 - (iii) If stabilization with lime is proposed, the optimum lime requirement for stabilisation should be determined (IRC : 51-1973).

Where high embankments are involved, special investigations should be carried out as per guidelines for the Design of high Embankments (IRC : 75-1979).

4. *Awareness of Problems Associated with Construction*

4.1. It is essential that the field engineer should be aware of problems that are likely to arise before, during and after construction so that suitable precautions can be taken at the appropriate time to ensure longer life, economy and satisfactory performance. Some of these are :—

- (i) Difficulties in pulverization of soil
- (ii) Failure of pavement due to swelling of subgrade soil
- (iii) Sloughing of side slopes
- (iv) Problems of surface and subsurface drainage
- (iv) Difficulties in maintenance of berms

4.2. The various steps to be taken to overcome the problem are set out in the succeeding paragraphs.

5. *Ground Preparation*

The route along which the alignment is proposed should be cleared off vegetation. It is then levelled and rolled to form a firm ground.

6. *Pulverization*

In as much as the expansive soil lumps from the borrow-pits would be upto 30 to 40 cm in size, it is difficult to achieve the desired compaction. Under the roller, the lumps may not break completely and remain separate with open voids in between. Further, the moisture content within the clods can be very much on the wetter or the drier side of O.M.C. It is, therefore, essential that the soil lumps should be pulverized to less than 5 cm size for effective compaction, so that the clods are kneaded and coalesced into a homogenous whole. The pulverization can be achieved using a disc harrow or rotavator or manually. Where lime stabilised sub bases are contemplated, 50% of design lime content may be added to contemplated, 50% of design lime content may be added to partially broken clods to aid pulverization (IRC : 49-1973).

7. *Compaction*

7.1. In the laboratory, O.M.C. is determined using Standard Proctor test. The normal practice in the field is to compact the clays at about 3% wet of laboratory O.M.C. But in the case of expansive soils, it is observed that plates of soil stick to the roller and heaving up is noticed on either side of the roller as it is moved. The dry density obtained will also be low. Evidently, the O.M.C. so obtained from the laboratory tests is very much on the wetter side. It is, therefore, suggested that a more realistic approach should be followed by actually conducting a field test to obtain field O.M.C. This is got from a field compaction curve by noting field densities at different moisture contents under the same number of passes of the roller. The field O.M.C. is found to be generally less than laboratory O.M.C. and more or less the same as that obtained from the modified AASHO test in the laboratory.

7.2. The equipment used for compaction in the field is a smooth-wheeled roller or a sheeps footroller. For clayey soils, sheepsfoot roller is best suited for compaction especially in view of the big lumps brought from borrowpits. Therefore these rollers are preferable to smooth wheel rollers. But in our country, use of smooth wheeled roller is common thereby necessitating pulverisation of lumps preceding the compaction.

7.3. Compaction is generally done in layers of 25 cm loose soil compacted to 15 cm so as to attain minimum of 95% standard proctor density. Sometimes, when compaction is done in the field at about 2% wet of laboratory optimum, the required density is not achieved and is apt to create problems. In such cases, the field O.M.C. described earlier should be resorted to.

8. *Drainage*

8.1. Normal camber of 1 in 40 for the black top surface and a cross slope of 1 in 20 for the berm should be provided to shed off surface run-off

8.2. No standing water should be allowed on either side of the embankment.

8.3. A minimum free board of 1 m should be ensured (The free board is defined as the distance between the bottom of the pavement crust and the highest water-table in the vicinity).

9. *Pavement Design*

9.1. A soaked CBR value found on the basis of laboratory tests should be taken as the design criterion for expansive soils.

9.2. Traffic survey should be conducted and a suitable curve on the CBR chart chosen keeping in view the future traffic demands (IRC : 37-1970)

9.3. *Blanket course*

9.3.1. A blanket course of 23 cm in thickness is necessary for the pavement crust and it should extend beyond the carriageway for the full width of the formation. The blanket course should be placed above the subgrade and below the pavement

9.3.2. The blanket course could be either sand/quarry spoils moorum (natural as mechanically stabilised or lime stabilised soil, based on local conditions and economy.

9.3.3. In places where drainage and free board conditions are likely to fall short of requirements, sand or moorum blanket courses should be preferred to lime stabilized soil blanket courses. Wherever moorum is plastic in nature, it should be treated with lime to bring down its P.I. to less than 5. The quantity of lime added will be determined on the basis of laboratory tests. About 2-3% lime of 25% purity is normally sufficient. Sand in suitable proportion can also be added to bring down the P.I. of moorum wherever economical. In the case of sand blanket courses, sand should be compacted with a plate vibrator. Alternatively, the sand layer can be rolled with a smooth wheel roller after wetting it sufficiently.

9.3.4. For the lime stabilised soil blanket courses, the following procedure should be strictly followed :—

- (i) The percentage of lime to be added to the soil to obtain a particular CBR should be determined in the

laboratory on the basis of percentage purity of lime

- (ii) In the field, about 1% excess lime should be added to take care of wind transportation losses, wastage and improper mixing.
- (iii) Mixing should be done with a rotavator, discharrow. Manual means may be adopted only where no mixing equipments are available.
- (iv) Scarifying should be done whenever a new layer is laid for proper bond.
- (v) Rolling should be completed within 3 hours of mixing
- (vi) 7 days curing should be followed.
- (vii) A field CBR test in a pit soaked for 4 days should be done to check the strength achieved in the field.

9.4. *Sub Base/Base*

9.4.1. Wherever stone is used over the blanket course as the sub-base, oversize metal should be used and its voids filled and rolled.

9.4.2. W.B.M. layer should be laid as per IRC Standards.

10. *Berms*

- 10.1. Berms should be preferably of lime-stabilised soil not only to provide an impermeable barrier but also to provide some rigidity to take care of occasional wheel loads.
- 10.2. At places where lime stabilised berms cannot be had, berms can be of compacted brick metal, soil aggregate or graded gravel.
- 10.3. Berms made up of permeable granular materials, like sand, moorum, quarry rubbish, etc. are not preferable. Where lime stabilised sub bases exist, rain water is found to percolate from these permeable berms into the pavement crust and stagnate because of the impermeable lime-stabilised soil barrier. Thus pavement flooding occurs leading to faster deterioration.
- 10.4. Berms should be atleast 1.5 m wide and 15 cm. in thickness.

11. *Embankment Slopes*

- 11.1. A slope of 2 horizontal to 1 vertical is found to be satisfactory for embankment made up of black cotton soil
 - 11.2. Embankment slopes should be turfed. Where turfing is not possible, the side slopes can be provided with a non-expansive soil cover of 50 cm thick.
 - 11.3. Gully formation on the side slopes is not uncommon following the monsoon but they should be brought back to original shape-through periodical maintenance.
-

304 EMBANKMENTS AND CUT SLOPES

<i>Code No</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
304.1 305	PL-67(3)/72-SP dt. 2.12.74	Pitching on Slopes. Specifications for Filter medium-for bridges financed partly or wholly from Central Funds	304/1
304.2	N.8/GR/128-W-NHV dt. 8.10.75	Construction of guide bunds for train- ing of rivers-Provision of extra height as compensation for anticipated settlement of embankment of the guide bunds.	304/1
304.3	PL-30(147)/74 dt. 26.7.76	Special measures for the Design of Roads in cut Sections	304/2
304.4	NHVI-50(21)/79 dt. 25.1.80	Investigation & Design for high Embankments at approaches to bridges & over bridges on NHs & other cen- trally financed roads.	304/3
304.5	RW/NHVI-50(21)/79 dt. 11.6.80	—do—	304/4
304.6	RW/NHVI-50(21)/79 dt. 11.5.84	Preliminary Soil Investigation for High Embankments at Approaches to Bridges	304/5

No. PL-67(3)/72-SP

Dated the 2nd Dec., 1974

To

All Chief Engineers,
Principal Engineers of the State,
Union Territories (Dealing with the Roads).

Subject: Pitching on slopes — Specification for filter medium — for bridges financed partly or wholly from Central Funds

Please refer to Clause No. 2502.2 of "Specification for Road and Bridge Works" issued by the Ministry of Shipping & Transport (Roads Wing), and replace the same by the modified clause given below :-

2502.2 General :

The pitching shall be provided as indicated on the drawings. Stone subject to marked deterioration by water or weather will not be accepted.

The stone shall be sound, hard, durable and fairly regular in shape. The largest stones procurable shall be supplied, and in no case shall any fragment weigh less than 40 kg unless otherwise permitted by the Engineer-in-Charge. The sizes of spalls shall be minimum 25 mm and shall be suitable to fill the voids in the pitching.

To drain off the seepage water and to prevent erosion of the base material, one or more layers of graded materials, commonly known as a filter medium, shall be provided underneath the pitching. The material for the filter shall consist of sound gravel, stone or brick ballast and coarse sand. The compacted thickness of the various layers of the filter material shall not be less than 150 mm each.

The gradation of the filter material shall satisfy the following requirements.

Requirement for filter material :

- | | | | |
|----|------|---|---|
| i) | i) | D_{15} of Filter | $= 5$ to 40 , provided that the filter does not contain more than 5% of material finer than 0.075 mm. |
| | | D_{15} of base material | |
| | ii) | D_{15} of Filter | $= 5$ or less |
| | | D_{85} of base material | |
| | iii) | The grain-size curve of the filter should be roughly paralalled to that of the base material. | |

Note :

Filter may not be required if embankment consists of CH or Ch soils with liquid limit greater than 30, resistant to surface erosion. If a layer of material is used in this case as bedding for pitching, it shall be well graded and its D_{85} size shall be atleast twice the maximum void size in the pitching.

In the foregoing, D_{15} means the size of the sieve that allows 15% by weight of the filter material to pass through it, and similar is the meaning of D_{85} .

- 2) If more than one filter layer is required, the same requirement as given above shall be followed.
The finer filter shall be considered as the base material for selection of gradation of the coarser filter.
- 3) The filter material shall be suitably compacted to a firm condition.

No. N.-8/GR/128-W-NHV.

Dated the 8th Oct., 1975

To

The Chief Engineers of all State P.W.Ds,
and Union Territories dealing with Roads

Subject: Construction of guide bunds for training of river-Provision of extra height as compensation for anticipated settlement of embankment of the guide bunds

The formation level of guide bund embankment is liable to settle in the course of time after construction on account of settlement of the foundation strata due to the weight of embankment and the compaction of the embankment itself due to its self weight. This would result in the reduction of available free board above the highest pond level, to values lower than the minimum specified limits.

2. In order to ensure that the formation level of the guide bund has the minimum specified clearance above the anticipated highest pond level it would be necessary to either construct the guide bund with

pre-calculated extra height of embankment initially itself or to add extra height to it as and when settlement is noticed to compensate for the settlement. It has accordingly, been decided that all guide bunds to be constructed in future, shall be designed and constructed initially itself with extra height to account for the estimated future settlement likely to take place during a period of two to three years after its construction. This may be calculated on the basis of soil properties of embankment material and the foundation strata ascertained by carrying out sub-soil investigations and conducting tests on the soil samples.

3. It is requested that the contents of this letter may be circulated among all officers in your department concerned with national highway works and other bridge works financed partly or wholly by the Central Government for their guidance and compliance.

304.3

No. PL-30(147)/74

Dated 26th July, 1976

To

The Chief Engineers of all State Public Works Departments and Union Territories dealing with roads

Subject: Special measures for the design of roads in cut sections

In rolling or hilly terrain, roads have frequently to be in cutting, whether the cut is only on one side or both the sides. For trouble-free service of such stretches, it is essential that appropriate design measures may be taken right at the beginning so as to ensure stable cut slopes and obviate problems arising from tricky drainage.

2. Inter alia, this Ministry has been emphasising the need for caution in such situations in its circulars issued from time to time, particularly letters No. NHI-37(2)/70 dated the 2nd April, 1970 and PL-50(13)/74-SP dated the 10th September 1974. In view of the importance of the problem, special attention is drawn to the following points of good engineering practice :-

- (i) The cut slopes should be stable for the material met with, as laid down in the Ministry's circular No. NHI-37(2)/70 dated the 2nd April, 1970. Where necessary, the slopes should be benched by introducing horizontal berms at appropriate levels. If need be, breast walls of suitable design may be provided in addition for improving the stability of the sloping ground;
- (ii) Road cuts usually upset the natural drainage of the area. With the removal of vegetation and creation of artificial steep slopes, surface water if left unchecked would create serious problems of erosion besides flooding of the road bed. It is, therefore, vital that the surplus water is intercepted and disposed of safely, quickly and efficiently. For this purpose, a suitable system of drainage must be designed for each site which may consist of catch water drains above the top of the cut slopes, interceptor drains on the surface of the slopes, and side drains at the toe of the cut sections. To be effective the drains must be of adequate capacity and appropriately joined to the normal drainage channels serving the area;
- (iii) Seepage water moving through subterranean channels is sometimes encountered in rolling or hilly terrain, especially where a layer of permeable soil overlies an impermeable stratum. Where encountered, such water must be intercepted either by means of deep side drains (French type or open with open deep road side drains, where used, guard stones must be provided on carriageway side.) and/or transverse subdrains running underneath the pavement, idea being to relieve the excess hydrostatic pressure and lower the water table. Buried transverse drains are of particular value at points of transition between the cut and fill sections for intercepting the seepage water which would otherwise flow along the road bed assisted by the down gradient. At such locations of transition between the cut and fill sections, the subgrade at the start of the fill section for say 10 metres length and for the full formation width extending upto the side drains/embankment slopes, should be made with compacted coarse sand/granular material non-plastic in character having a depth of about 1 metre;
- (iv) Because of generally adverse drainage conditions in the cut sections, greater vigilance than normal is called for when finalising the design of the pavement. The subgrade in the cut section where found to be inadequately dense or having cavities, minor hollows, etc. should be excavated and recompacted to meet the expected requirement of 100% Proctor density for 18" (45 cms.) compacted thickness, being achieved through laying of three compacted layers of 15 cm. each. Where this subgrade material may be found to be poor in strength in worst moisture conditions even compacted to 100% Proctor density, consideration should given to better soil for making the subgrade for 18" (45 cm.) compacted thickness, being brought from an outside, but as economical as possible, source, such soil desirably being granular/gravelly in nature of a non-plastic or close to non-plastic and very low plasticity character. Crust thickness in these stretches should be invariably based on the strength of the subgrade under worst moisture conditions likely during the entire service life of the road. Essential principles for this stand highlighted in IRC: 37-1970 "Guidelines for the Design of Flexible Pavements". Therein the requirements of drainage measures essentially allied to the pavement design have been particularly dealt with in paragraphs 5.1 to 5.4. Where water table in the worst conditions in the cut section road bed below or in the subgrade is expected to be high the requirements of construction of road pavements in water-logged conditions dealt with in IRC publication No. 34-1970 get attracted and desirably a capillary cut-off layer in coarse sand/granular and material like gravel, sand gravel non-plastic in character for a requisite depth, should be used as an essential part of the pavement requirement. The layer of such a material should extend over the full formation width right upto the side drains; and

- (v) Many a time poor soils are met with on the cut formations, which are susceptible of easily becoming slushy and slippery when in contact with water. In such cases, consideration deserves to be given to the paving of the entire shoulder area between the carriageway edge and the toe drain so that the vehicles can move with greater safety.

3. It is requested that this circular may be brought to the notice of all officers in your department.

304.4

No. NHVI-50(21)/79

Dated 25th Jan. 1980

To

The Chief Engineers dealing with
National Highways and other centrally
financed works in States/Union Territories.

Subject : Investigations and design for high embankments at approaches to bridges and overbridges on National Highways and other centrally financed roads.

There have been many instances where inordinate delays, increases in cost and other execution difficulties (including some cases of inadequate performance) have been associated with the construction of high approaches to bridges over river crossings and to railway overbridges on National Highways and other centrally financed roads. There have been even cases where completed bridge or overbridge structures had remained unutilized for some time because of the approaches not having been completed in time. Such difficulties have been found to be mostly associated with adequate or timely attention not having been paid to the planning and design of high embankments constituting the approaches.

2. High embankments at approaches to bridges and over-bridges should be appropriately treated as critical project components, since they usually involve large outlays, large volumes of work, large right-of-way widths and, quite often, problems of site constraints in the form of restricted spaces, non-availability of local borrow areas, weak substrata (requiring in some cases construction in stages) susceptibility to erosion, etc. In addition, there is the vital requirement of coordination between approach and bridge components, particularly, as regards design and construction programming.
3. The requirement of soil investigations and embankment design for high approaches as mentioned above, was earlier dealt with in this Ministry's letter No. PL-86(41)/72-SP, dated 13.8.73. In the light of the experience gained since then, the updating of the earlier recommendations was called for. Accordingly a Note has been prepared in this Ministry for highlighting important aspects of investigations and design for high embankments on approaches to bridges and overbridges. Part I of the note outlines in brief the basic steps and procedures involved, while in Part II of the note, the details of procedures and technical considerations are explained. A copy of this Note is enclosed for your information and guidance. It is requested that the suggestions contained in the enclosed Note may kindly be kept in view while formulating proposals for high approach components of bridge-cum-approach projects on National Highways and other centrally financed roads. As regards the broader technical aspects of embankment design, your attention is invited to the forthcoming Indian Roads Congress publication entitled "Guidelines for High Embankment Design".
4. You may also kindly get prepared a list of bridges and overbridges involving high approaches that are likely to be taken up for execution during the current five years plan period, and initiate appropriate actions for taking up soil investigations design etc. in good time. This will not only avoid unforeseen delays and difficulties in execution of the type mentioned in para 1 above, but also make it possible to effect economies in construction costs through adoption of advanced methods of design combined with proper phasing of construction in the light of actual site conditions.
5. Suggestions for additions and alterations to the enclosed Note with a view to improving its usefulness will be welcome.

Note : Enclosures not attached. However, copy of the Note can be obtained from Roads Wing on request.

No. RW/NHVI-50(21)/79

Dated, the 11th June, 1980

To

All Chief Engineers, dealing with National Highways and other Centrally-Financed Works in States/Union Territories

Subject: Investigations and design for high embankments on approaches to bridges and over-bridges on National Highways and other Centrally Financed Works.

Kindly refer to the Ministry's letter No. NHVI-50(21)/79, dated the 25th January, 1980, addressed to you, in which the importance of carrying out soil investigations and embankment design for high approaches to bridges and over-bridges was stressed and a detailed Note (Parts I and II) was also enclosed therewith, highlighting the important aspects of the steps and procedure for investigation and design of high embankments.

2. In para 4 of the letter cited above, you were also requested to get prepared a list of bridges and over-bridges likely to be taken up for execution during the current Five Year Plan period and initiate appropriate actions for taking up soil investigations, design, etc. in good time.
3. In para 2 of the part I of the Note mentioned above, the procedure for drawing up State-wise lists of high embankment stretches requiring soil investigation and embankment design as per prescribed Proforma I and II were indicated. Proforma I relates to sanctioned works where no investigation has yet been taken up and Proforma II relates to the proposed works included in the inescapable list and the Five Year Plan but not sanctioned. The high embankment stretches are also required to be listed in the prescribed proforma in order of their priority taking due account of their status as regards sanction, execution, targets, dates of commencement, coordination with the programme of sanction and execution of the bridge structures, etc.
4. In this connection, your attention is also invited to minutes of discussions on item No. 15 of the agenda of the Chief Engineers' meeting held at Jaipur on 7th February, 1980 (minutes forwarded vide Ministry's letter No PL-2(2)/80, dated the 28th April, 1980). As mentioned therein, Shri N. Sivaguru, Chief Engineer of this Ministry, had pointed out that the State Chief Engineers were already having the sixth Plan document, which listed out the various projects in order of priority and it should be possible from this document to identify the locations of high embankments and other difficult situations requiring detailed sub-surface investigations. It was also suggested that such projects should be taken up for investigation in a phased manner at least three years ahead of the year in which they are intended to be financially sanctioned.
5. It is requested that expeditious action may please be taken regarding the listing of high embankment stretches calling for soil investigations and high embankment design as per proforma I and II mentioned in para 3 above and also for initiating the necessary steps for investigation and design under intimation to this Ministry. Copies of Proforma I and II in which information is to be completed are enclosed for your ready reference.

PROFORMA-I

LIST OF EMBANKMENT DESIGN CASES IN RESPECT OF SANCTIONED WORKS FOR WHICH EMBANKMENT DESIGN IS NOT AVAILABLE.

State : _____

Sl. No.	Name of work	N.H.No./ Name of Road	Job No. Date of sanctioning sanctioned amount	Date of commencement of execution	Target date of completion of execution	Present position of execution
1.	2.	3.	4.	5.	6.	7.

Length of high embankment stretch involved with maximum and minimum heights of embankment	Position of estimate for soil investigation	Targets for soil investigation and embankment design			Remarks including whether related bridge work sanctioned, need for coordinated progress
		Date of commencement of soil investigation	Date of completion of soil investigation	Date of finalisation of embankment design	
8.	9.	10.	11.	12.	13.

Note : Where the high embankment falls in a reservoir impounded by a dam, the present stage and target date of completion of dam should be indicated in Col. 13.

PROFORAMA - II
LIST OF EMBANKMENT DESIGN CASES FOR WORKS INCLUDED IN INESCAPABLE LISTS OR SIXTH FIVE YEAR PLAN, BUT NOT YET SANCTIONED.

Sl. No.	Name of work	N.H. No. Name of road	Estimated amount	Present position of preparation/ submission of estimates (soil investigation and works)	Targets of execution	
					Date of commencement	Date of completion
1.	2.	3.	4.	5.	6.	7.

Length of high embankments stretch involved, with probable maximum and minimum heights of embankment	Targets for soil investigation and embankment design			Remarks including need for coordination with any related bridge works
	Date of commencement of soil investigation	Date of completion of soil investigation	Date of finalisation of embankment design	
8.	9.	10.	11.	12.

Note : Where the high embankment falls in a reservoir impounded by a dam, the present stage and target date of completion of dam should be indicated in Col. 12.

304.6

No. RW/NHVI-50(21)/79

Dated the 11th May, 1984

To

The Chief Engineers dealing with National Highways, and other Centrally financed Road and Bridge works in States/Union Territories

Subject: Preliminary soil investigations for high embankments at approaches to bridges

It is sometimes required to assess the feasibility of high embankments approaches to bridges at an early stage of project preparation e.g. when the various important features of the bridge-cum-approach project might be still tentative. In such cases, soil investigations for the approaches should be carried out on a preliminary basis, but simultaneously with the soil investigations for the bridge foundations and preferably through a common investigation agency. On the basis of the soil data so available, it is to be assessed whether the layout and cross sections of the approach embankments can be decided on a final or tentative basis. If the latter be the case, further detailed soil investigations may be required for finalising the design of high embankments. Such necessity will generally arise in case of important projects and/or problematic ground conditions.

2. In the light of the considerations mentioned above, "guidelines for preliminary soil investigations for high embankments at approaches to bridges" have been evolved in this Ministry and the same are enclosed herewith. It is suggested that these guidelines may be made use of for ensuring that the soil investigations required for approaches to bridges are carried out expeditiously and at an early enough stage of project preparation.
3. Suggestions for additions and alterations to the enclosed guidelines will be welcome.

GUIDELINES FOR PRELIMINARY SOIL INVESTIGATIONS FOR HIGH EMBANKMENTS AT APPROACHES TO BRIDGES

1. Scope and purpose

The purpose of preliminary soil investigations for high embankments is to assess the feasibility of high embankments at a stage when the various features of the bridge-cum-approach project might be still tentative and also to bring out the need or scope for more detailed investigations, where appropriate. To serve this purpose, the preliminary soil investigations for approaches to bridges should be carried out simultaneously with the initial sub-soil investigations for the bridge proper and through a common investigations agency. On the basis of the soil data so available, it is to be assessed whether the layout and cross-sections of the approach embankments can be decided on a final or tentative basis. If the latter be the case, further detailed soil investigations will be called for. Such necessity will generally arise in case of important projects and/or problematic ground conditions. (Where soil investigations are being carried out after the alignment plans, longitudinal sections and bridge abutment positions have been finalised, these are to be treated as detailed investigations for which the present guidelines will not apply).

2. Location of boreholes

There will be minimum two boreholes for each approach i.e. a total of four boreholes covering both side approaches. The borehole positions may be located along the centre line of the proposed alignment and at distances of approximately 50 metres and 120 metres behind the abutment positions on both sides. If the subsoil conditions revealed from the four boreholes as above are indicated to be weak and/or highly variable, locating additional boreholes for clarifying the subsoil conditions may be given consideration.

3. Depths of boreholes

The depth of the boreholes below the ground level may ordinarily be $2\frac{1}{2}$ times the maximum height of the embankment, subject to a minimum depth of 20 metres. However, the boreholes can be terminated at shallower depths if continuous hard strata yielding N value in excess of 50 are encountered. The continuity of the hard strata should be verified by extending the boreholes into the hard strata by 2 to 3 metres.

4. Collection of undisturbed samples

Thin-walled sampling tubes of 100 mm internal diameter and 450 mm minimum length conforming to IS 2132-1972 (in respect of area ratio, clearance ratio and other characteristics) should be used for collecting undisturbed samples from boreholes. One sample may be collected for each change of strata.

In thicker strata, more than one undisturbed sample should be collected and in such cases, the depth interval between successive sampling levels may be 2.5 to 3.5 metres. No undisturbed samples need be collected from purely cohesionless strata or from hard strata yielding N-value in excess of 50.

5. Carrying out Standard Penetration Tests (SPT)

This test should be done (according to IS : 2131-1981) immediately after the undisturbed samples have been collected in the manner described in para 4 above. In cohesionless or hard strata from which undisturbed samples are not be collected (vide para 4 above), SPT may be done at 1.5 to 2 m depth intervals. The soil entering the SPT spoon should be taken out and visually inspected for taking note of physical appearance, structure (e.g. fissures and inclusions), etc. and preserved as disturbed sample in airtight containers.

6. Laboratory tests on boreholes samples

Undisturbed and disturbed samples collected from the boreholes may be subjected to laboratory tests along the lines indicated in Annexure I.

7. Laboratory tests on fill materials

Representative samples of fill materials intended to be used for forming the approach embankments should be collected and subjected to laboratory tests along the lines indicated in Annexure II.

8. Borings at abutment locations

The results of soil investigations for bridge foundations are also to be utilised for assessment of high embankment feasibility and for correlating bridge and embankment features in the vicinity of

the abutment positions. Keeping this in view, it is important for the boreholes at abutment locations in particular, that the portion of the soil profile lying above the scour level is not excluded from the scope of sample collection and testing. In all other respects, soil investigations at the abutment locations may be done as appropriate from the point of view of bridge foundation requirements.

9. Soil investigation report

The soil investigation report may generally be organised into sections comprising (i) general report and conclusions including brief description of equipments and methods used for boring, sampling and testing (ii) borehole plan, borelogs, field test data and pictorial representations of soil profiles, (iii) laboratory data and plots for borehole samples, and (iv) laboratory data and plots for fill materials, including borrow-area plan and brief description of collection of fill material samples.

10. Miscellaneous

- i) In carrying out boring and sampling and in compiling borelogs, the relevant provisions of IS : 1982-1979 (Standard Code of Practice for Site Investigation for Foundations) should be complied with.
- ii) If there be the cases where attempts made to collect samples or carry out field tests are found to be unsuccessful, the same should be reported with reasons in the borelog.
- iii) The locations of the boreholes can be marginally adjusted (by say upto about 10 metres or so in any direction), if this is felt necessary in the light of local site conditions.
- iv) Boring, sampling, field tests and laboratory tests should be carried out under the supervision of a specialist geotechnical engineer. It will be desirable to finalise the programme of laboratory tests after evaluating borelogs and field test data.

ANNEXURE - I

LIST OF LABORATORY TESTS TO BE CONDUCTED ON BOREHOLE SAMPLES

1. Tests on undisturbed samples

Undisturbed samples are those collected in 100 mm dia thin-walled tubes conforming to IS : 2132-1972. These should be tested in the laboratory for the determination of the following soil properties :

- (i) Grain size analysis (as per IS : 2720 Part IV-1975)
- (ii) Natural moisture content (as per IS : 2720 Part II-1973)
- (iii) LL & PL (as per IS : 2720 Part V-1970)
(For soils suspected to be organic in nature, by virtue of colour, odour, texture, etc., LL on fresh as well as on oven-dry specimens may be separately found out)
- (iv) C_c , C_v and P_c (preconsolidation pressure) from consolidation test (according to IS : 2720 Part XV-1965).
- (v) C and ϕ from unconsolidated, undrained (UU) triaxial test (according to IS : 2720 Part XI-1971). Bulk density, void ratio and moisture content before/after UU test should also be determined.

2. Tests on selected undisturbed samples

Where the method of stage construction of embankment based on the effective stress method of design requires to be kept in view, selected and representative undisturbed samples should be further tested in the laboratory for the determination of the following soil properties :-

C_u , ϕ and A-factor from consolidated undrained triaxial tests with measurement of pore pressure i.e. CU tests (according to IS : 2720 Part XII-1981). Bulk density, void ratio and moisture content before/after CU test should also be determined.

3. Tests on disturbed samples

Samples recovered from the SPT spoon should be retained in glass jars sealed air-tight. These samples may be treated as disturbed samples and should be tested in the laboratory for the determination of following soil properties :-

- (i) Grain size analysis (according to IS : 2720 Part-IV-1975)
- (ii) Natural moisture content (as per IS : 2720 Part II-1973)
- (iii) LL & PL (as per IS : 2720 Part V-1970)
(For soils suspected to be organic in nature by virtue of colour, odour, texture, etc., LL on fresh as well as on oven-dry specimens may be separately found out).

4. Special remarks

- (i) Laboratory tests should be carried out in accordance with the prescribed ISI Specifications/Codes and under the supervision of a specialist geo-technical Engineer.
- (ii) Full laboratory records (e.g. measured values, particle size distribution curves, stress-strain curves, Mohr circle plots, e-log P curves, e-log t curves, etc.) should be included in the soil investigation report.
- (iii) While carrying out UU or CU tests mentioned above, the test specimens should be got saturated in the triaxial cell by applying suitable back pressure before shearing, if the undisturbed samples have been collected above the water table, or if there be any doubt otherwise about the state of sample saturation.
- (iv) It will be desirable to finalise the programme of laboratory tests after evaluating borelogs and field test data. In case of any

- doubts regarding the type and quantum of laboratory tests to be carried out, clarifications may be sought before carrying out the tests.
- (v) The left-overs of samples, after testing, should be preserved till the design of embankments have been finalised and preferably till the construction has been completed.
 - (vi) The years of IS Codes/Specifications cited in paras 1 to 3 above are as per information available. In case these have been revised in later years, the provisions of the later revisions will apply.

ANNEXURE - II

LIST OF LABORATORY TESTS TO BE CONDUCTED ON FILL MATERIALS TO BE USED FOR FORMING HIGH EMBANKMENTS

1. Obtaining samples of fill materials

For each type of soil encountered within the likely depth of excavation in the selected borrow areas, two representative samples of weight 30 kg each should be collected in cloth bags or in polythene-lined gunny bags. The exact locations and depths of the samples should be noted and shown on a borrow area plan. Corresponding to each 30 kg sample, one small sample from the selected location (of one kg. weight or so) may be collected in air-tight glass jars for the determination of natural moisture content.

2. Laboratory tests to be done

- (a) Test to be done on each sample
 - i) Grain size analysis (as per IS : 2720 Pt. IV-1975)
 - ii) Natural moisture content (as per IS : 2720 Pt. II-1973)
 - iii) LL and PL (as per IS : 2720 Pt. V-1970)
(For soils suspected to be organic in nature by virtue of colour, texture, odour, etc., LL on fresh as well as on oven-dry specimens may be separately found out).
 - iv) Moisture-density relationship using light compaction, commonly known as Proctor test (as per IS : 2720 Pt. VII-1980).
- (b) Strength tests on selected samples :
On the basis of tests conducted as per (a) above, the samples may be categorised into types, each showing the same or closely similar soil characteristics. One or two samples out of each category may be judiciously selected so as to be representative and subjected to the following tests :-
 - (i) For cohesive fill material (e.g. clay or clay mixed with silt/sand), C & ϕ may be determined from unconsolidated undrained (UU) triaxial test (according to IS : 2720 Pt. XI-1972) on specimens remoulded to 95% Proctor density at O.M.C. plus 2%.
 - (ii) If the fill material is cohesionless, Q may be determined from direct shear test (according to IS : 2720 Pt. XIII-1972) on specimens remoulded to 95% Proctor density at OMC.
 - (iii) For cohesive fill materials which may be used for forming embankments likely to be subjected to submergence and drawdown, effective stress parameters C and ϕ as also A -factor, may be determined from consolidated undrained test with measurement of pore pressure i.e. CU tests (according to IS : 2720 Pt. XII-1981) on specimens remoulded to 95% Proctor density at OMC plus 2%. The test specimens in the triaxial cell may be saturated by applying back pressure before shearing. This test will be in addition to that mentioned in (b) (i) above and may be carried out for selected few representative samples only.
 - (iv) For any of the types of strength tests mentioned above, the actual bulk density, void ratio and moisture content of the specimen before/after the test should be found out and recorded.

3. Special Remarks

- (i) Laboratory tests should be carried out in accordance with applicable ISI Specifications/Codes and under the supervision of a specialist geo-technical engineer.
 - (ii) Full laboratory records (measured values, particle size distribution curves, moisture density plots, stress-strain curves, Mohr circle plots, etc.) should be included in the soil investigation report.
 - (iii) In case of any doubts regarding the type and quantum of tests to be carried out, clarifications may be sought before carrying out the tests.
 - (iv) The left-overs of samples, after testing, should be preserved till the design of embankments has been finalised and preferably till the construction has been completed.
 - (v) The years of IS Codes/Specifications cited in paras 1-2 above are as per information available. In case these have been revised in later years, the provisions of the later revisions will apply.
-

305 PROTECTION MEASURES & SPECIAL PROBLEMS — CANAL LININGS, EROSION CONTROL, BORROW PITS PRACTICE ETC

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>305.1</u> 304	PL-67 (3)/72 SP dt. 2.12.74	Pitching of slopes	See Code No. 304
<u>305.2</u> 302	NHII/Misc/37/36 dt. 5.10.78	Provision of Hand Shoulders on approaches to overbridge	See Code No. 302
305.3	NHIII/P/15/79 dt. 1.8.79	Lining of Drainage/Irrigation Channels running close to the NHs	305/1
305.4	PL-30(119)/79 dt. 11.10.79	Special steps to Prevent Soil Erosion in Hilly Areas in the Context of Overall Soil Conservation Measures in the country	305/1
<u>305.5</u> 303	PL-17 (9)/76 dt. 20.3.81	Construction of Roads in Expansion Soil Areas	See Code No. 303
305.6	NHIII/P/44/82 dt. 22.7.82	Adoption of Prescribed Standards for Borrowpits for Road Embankments	305/5
305.7	NHVI-50(3)/83-Pt. dt. 15.4.83	Safety Measures dealing with Excavation and blasting Operations	305/5
305.8	NHVI-50(3)/83 dt. 23.4.83	Digging of borrowpits, at the Rear of the Guide Bunds for Bridges on NHs & other centrally Financed Roads	305/6
305.9	NHVI-50(3)/83 dt. 6.6.83	Digging of borrowpits within the Khadir Width of Riyers for Construction of embankments as Approaches to bridges	305/6

No. NHIII/P/15/79

Dated 1st August, 1979

To

All State Govts./Union Territories (Deptts. dealing with National Highways)

Subject: Lining of drainage/irrigation channels running close to the National Highways

I am directed to say that it has, of late, been observed that in certain areas in the country where water table has risen in the last 10 to 15 years or may be still rising due to more irrigation being brought into these areas and aggravated floodibility problems, the road surface of the National Highways is getting wavy and the road crust has started showing signs of distress. The waviness in the road is breaking the road crust in the vicinity where the irrigation distributory/channels is/are crossing the road or running parallel to it. Obviously, this is due to seepage of water from the irrigation distributory/channels running beneath the road surface.

2. Apart from the National Highways, the State Roads may also have been affected. It is, therefore, in the States' own interest to take some preventive measures to remedy the situation for the States Road System. One of the measures that can conceivably be adopted to check leakage/seepage of water is by lining the irrigation channels to minimise rise of water table due to percolation and also by way of states considering to bring in some tube-well irrigation etc. Besides, the States may also consider improving the flood drainage system of the affected areas so that the flood water is drained off the road with the least possible delay.
3. I am, accordingly, to request the State Government to give serious thought to this problem and assess the situation in their States and consider, in consultation with the States Irrigation and Flood Control Authorities, as to what steps should be taken to remedy the situation. The results of your assessment of this situation and the remedial measures that may be taken in the matter may please be intimated to this Ministry at an early date.

No. PL-30(119)/79

Dated the 11th Oct, 1979

To

- (1) The Chief Engineers of all State PWDs and Union Territories (dealing with roads)
- (2) Director General Border Roads
- (3) Engineer-in-Chief, C.P.W.D.

Subject :- Special steps to prevent soil erosion in hilly areas in the context of overall soil conservation measures in the country

The need to conserve the country's land and soil resources requires no special emphasis. Road construction in hilly areas tend to upset the natural setting and contribute to the loss of these irreplaceable resources and as such calls for careful attention right from the stage of conception of the road to surveys and investigations, project formulations construction and subsequent maintenance. To ensure that best results are achieved and expensive maintenance procedures are avoided, measures taken should not be considered in isolation but built into the road project itself as an integral part with all necessary provisions for the purpose.

2. To combat the problem of land degradation and soil erosion associated with road construction in hilly areas, the Ministry had recommended certain measures for adoption on National Highways and State Roads, vide D.O. letter No. PL-50(13)/74 dated the 10th September 1974 from DG (RD) & Addl. Secretary addressed to all State Chief Engineers copy enclosed for ready reference (Annex. I). It has, however, been observed in certain cases that these instructions have not been fully adhered to and roads continue to be built in an unplanned manner without adopting the basic soil conservation and slope stabilisation measures. In view of the importance of all this in the national context, it is reiterated and emphasised that the State PWDs and other agencies involved in road construction in hilly areas should take all the necessary measures right from the project conception stage to ensure that land degradation and soil erosion are prevented to the maximum extent possible. For facilitating the designers and field staff in this regard, measures to be taken at different stages in the construction of roads in hilly areas are given in Annexure II. The points of guidance given in this Annexure are

not exhaustive and there could be other measures which have been found to be successful under particular situations. In this context, due consultation with officers of the Forest and Soil Conservation Departments will be helpful. To ensure that the soil conservation measures are planned and executed in a systematic manner and no important features are lost sight of, a check list is suggested vide Annexure III. Preferably this list should form a part of the road project itself for facilitating cross-checking of the requirements at different stages.

3. Many of the points of guidance given in Annexure II equally apply to existing roads. The check list in Annexure III can also be used to identify existing deficiencies as regards erosion prevention and to evolve suitable remedial measures so that there is concerted and coordinated action on this important aspect. It is suggested that the concerned Executive Engineer of the PWD and the District Forest Officer jointly discuss to identify existing roads having problems of soil erosion or passing through vulnerable areas. These roads could be jointly surveyed by them for evolving appropriate remedial measures for implementation. This process would also help the PWD Engineers to get conversant with erosion prevention measures so that they can apply these on other roads in general including those that may be planned to be built hereafter.
4. It is requested that necessary action may be taken on the above suggestions under intimation to this Ministry. This circular may please be brought to the notice of all officers of your department engaged on road works in the hilly terrain as also other State Institutions dealing with road construction such as Zilla Parishads, Rural Engineering Organisations, Forest Department, Irrigation and Project Authorities, etc.

ANNEXURE I

LETTER NO. PL-50(13)74-SP DATED THE 10TH SEPTEMBER 1974 FROM DIRECTOR GENERAL (ROAD DEVELOPMENT), MINISTRY OF SHIPPING AND TRANSPORT (ROADS WING), NEW DELHI ADDRESSED TO CHIEF ENGINEERS OF ALL STATE PUBLIC WORKS DEPARTMENTS AND UNION TERRITORIES DEALING WITH ROADS.

Subject : Special steps to prevent soil erosion in hilly areas in the context of overall soil conservation measures in the country

The need to conserve and build the country's land and soil resources, so that these serve the present as well as future generations, has assumed paramount importance in the wake of developing shortage of tillable land and water resources. Unplanned road construction in hilly areas has been identified as one of the causes contributing to loss of these resources.

2. By its very nature, road construction in hills is a destructive process for the strata of the hill side, at least in the initial stages. Road cuttings through areas otherwise not susceptible to land-slides normally disturb the natural inclination of the soil in such a way as to create conditions for large scale landslides in the first few years after construction. Even dense forests are not immune to this problem. With the removal of vegetative cover, destructive action of water gets further pronounced and accelerates the process of soil erosion and formation of deep gullies. End result of this is that enormous quantities of soil and rock move down the rivers, lakes and finally to the sea.
3. It is, therefore, necessary that utmost care is taken during road construction, as regards planning of works and treatment of the catchment area of drainage, so that soil erosion is prevented as far as possible. To combat this problem, the following measures are especially commended, for adoption on National Highways as well as State Roads :-

- (i) Roads should not be located through geologically unstable strata if this can be avoided;
- (ii) Road alignments should avoid large scale cuttings and fillings, and follow the lie of the land as far as possible. Use of tunnels to avoid deep cuts should be considered where feasible as also economical;
- (iii) Where necessary, provision of breast walls of suitable design should be considered to help achieve stability of the hill cuttings;
- (iv) To the extent feasible, roads should be aligned away from streams and torrents except where these are to be crossed. Since the greatest damage always occurs along water courses, special attention is necessary to create protection belts of forests on both sides;
- (v) Drainage of water from the roadside must be given top attention and necessary system of drains constructed to lead the runoff to natural water courses. In particular, suitable interceptor and catchwater drains must be provided above the cut slopes for speedy and safe disposal of rain water;
- (vi) Excavated material should not be thrown haphazardly but dumped at suitable places where it cannot get easily washed away by rain. It is otherwise expected as a normal requirement of hill road design that the cross-section is either wholly in cutting, so that with the adoption of retaining walls of a suitable type, the cutting spoils can be utilised to the extent possible, guided of course by consideration of economy and best road stability;
- (vii) Depending upon the availability of land and other resources, afforestation of roadside land should be carried out to a sufficient distance on either side of the road. The selection of plant species will depend on climate, altitude and soil conditions, but preference should be given to deep rooted trees and plants. For preparing the detailed scheme of afforestation, persons having knowledge of soil conservation or forestry should desirably be associated.
- (viii) Vegetative cover should be established on all cut/fill slopes through any one of techniques described in L.R.C. Standard

"Treatment of Embankment slopes for Erosion Control" (under print). The activity of establishing vegetation on barren slopes should be treated as part of the regular maintenance operations on all hill roads.

4. It is requested that necessary action may be taken on the above suggestions under intimation to this Ministry. This circular may please be brought to notice of all officers in your department engaged on road works in the hilly terrain as also to other State institutions dealing with road construction such as Zilla Parishads, Rural Engineering Works Organisations, Forest Departments, Irrigation and Power Project Authorities, etc.

Annexure II

POINTS OF GUIDANCE ON PREVENTION OF SOIL EROSION NEEDING ATTENTION IN THE CONSTRUCTION ROADS IN HILLY AREAS

1. General

1.1. Aspects relating to route selection and highway location, surveys and investigations, preparation and presentation of road projects, etc. are discussed in detail in IRC Special Publication No. 19 "Manual for Survey, Investigation and Preparation of Road Projects". For road construction in hilly areas, while the guidelines given in this Manual apply equally and have to be duly considered, the following points related to prevention of soil erosion should be specially kept in view during different operations.

1.2. Effective erosion prevention and soil conservation measures require careful attention at different stages of a road project, starting right from the stage of project conception. To help the concerned Engineers in determining whether all aspects, considerations and items of work with regard to erosion prevention have been duly taken into account and to facilitate review at different stages, a check list has been prepared, Annexure III. The check list which should be read in conjunction with the points of guidance listed hereunder should form part of the road project itself for facilitating cross checking of the requirements at different stages.

2. Points of Guidance

- (i) The road construction project estimates should provide for not only the requisite scale of investigations but also the necessary measures against soil erosion so that these can be built into the project with adequate financial provision.
- (ii) Before finalising the alignment, erosion potential of each alternative should be carefully examined, and the one involving least disturbance to the natural ground should be preferred.
- (iii) Roads should not be located through geologically unstable strata if this can be avoided. Study of the geological maps of the area and consultations with the local Geological Department will be helpful in this regard.
- (iv) Road alignments should avoid large scale cuttings and fillings and follow the lie of the land as far as possible. Use of tunnels to avoid deep cuts should be considered where feasible and economical.
- (v) To the extent feasible, roads should be aligned away from streams and torrents except where these are to be crossed. Since the greatest damage always occurs along water courses, special attention is necessary to create protection belts of forests on both sides.
- (vi) It will be advisable, at least for important roads, to have consultation with the officers of the Forest Department at the stages of route/alignment selection, surveys and investigations etc. so as to ensure that the selected alignment has minimum potential for soil erosion and that the project designs and estimates provide for the necessary soil erosion control measures. The idea is that with such joint consultation pursuits practiced for some selected roads, the PWD Engineers would get conversant and should be able to take care of such requirements by themselves for other road projects in general.
- (vii) Where the road is in cutting, half cut and half fill type of cross section which involves least disturbance to the natural ground should be adopted subject to considerations of economy and road stability being satisfied.
- (viii) The cut slopes should be made stable for the type of strata in the initial construction stage itself by resorting to stable cut slopes with benches etc. including the use of slope stabilising structures like breast walls, pitching etc.
- (ix) For treatment of unstable areas, say 50 M above and 30 M below the road level depending on the site conditions, necessary funds should be provided in the project estimates. This may even be in the form of certain percentage of total cost but based on some possible assessment of treatment works possibly needed.
- (x) Area for clearing and grubbing should be kept the minimum subject to the technical requirements of the road. The clearing area should be properly demarcated to save desirable trees and shrubs and to prevent overclearing.
- (xi) Where erosion is likely to be a problem, clearing and grubbing operations should be so scheduled and performed that grading operation and permanent erosion control features can follow immediately thereafter if the project conditions permit, otherwise temporary erosion control measures should be provided between successive construction stages. This requirement has already been stressed in the Ministry's "Specifications for Road and Bridge Works" (vide clause No. 306.3). Under no circumstances however should very large surface area of erodible earth material be exposed at any one time by clearing and grubbing.
- (xii) Location and alignment of culverts should be so chosen as to avoid severe erosion at outlets and siltation at inlets.
- (xiii) The cross-drainage structures should discharge safely on the valley side, and in this connection, all necessary precautions/safeguards should be taken to ensure that the discharging waters do not cause erosion even when they flow for long periods. For this purpose, all necessary channel training and erosion control works like pitching/paving of the

channel and outfall points, drop walls, flexible apron etc. should be considered and provided for as a part of initial design and construction.

- (xiv) Drainage of water from the roadside must be given **top attention** and necessary system of drains constructed to lead the runoff to natural water courses. In particular, suitable **interceptor** and catch water drains must be provided above the cut slopes for speedy and safe disposal of rain water. The **drains** should have gentle gradients and side slopes to carry flows safely without erosion.
- (xv) Excavated material should not be thrown haphazardly but **dumped** duly dressed up in a suitable form at suitable places where it cannot get easily washed away by rain and such **spoil deposits** may be duly turfed or provided some vegetative cover towards the same purpose.
- (xvi) Depending on the availability of land and other resources, **afforestation** of roadside land should be carried out to a sufficient distance on either side of the road. The **selection of plant species** will depend on climate, altitude and soil conditions, but preference should be given to **deep rooted trees** and plants. For preparing the detailed scheme of afforestation, persons having knowledge of soil conservation or forestry should desirably be associated;
- (xvii) Vegetative cover should be established on all cut/fill slopes through any one of the techniques described in IRC : 56-1974 "Recommended Practice for Treatment of Embankment slopes for Erosion Control". The activity of establishing vegetation on barren slopes should be treated as part of the regular maintenance operations on all hill roads.
- (xviii) Strip forests suitable for the site conditions for a **minimum distance** of 30 m on either side of the road should be provided. These shall be raised and maintained by forest authorities. No felling except of dead or dying, of trees should be permitted in this area.
- (xix) Along with other road components, due attention **should be paid** to the maintenance of drainage and soil conservation works. Drains, catchpits etc. should be cleared of all **debris** and repaired where necessary before the on-set of the rainy season. Eroded areas should be promptly made up **and provided** with vegetative cover.
- (xx) For any seriously problematic areas where **natural measures** are not likely to be successful, specialist organisations like the CRRI, GSI etc. may be consulted for evolving suitable remedial measures.

Annexure III

CHECK LIST OF POINTS ABOUT EROSION CONTROL IN THE CONSTRUCTION OF ROADS IN HILLY AREAS

1. Does the road construction project estimate provide for the **necessary measures** against soil erosion?
2. Have soil maps and aerial photographs studied and **investigations made** to locate areas or sections with high erosion potential?
3. Has erosion potential been considered for each alignment?
4. Have **geological maps** been studied or local Geological Department consulted to avoid unstable strata?
5. Does the selected alignment follow the lie of the land and **avoid large scale cutting**?
6. Has use of tunnels to avoid deep cuts been investigated?
7. Is the road alignment susceptible to damage/erosion by **streams and torrents**?
8. Is consultation/coordination with other departments like **Forest Department** necessary? If so, have they been consulted?
9. How will adjacent and nearby streams, ponds and lakes be **affected** by project construction?
10. Will special erosion control measures be required to **protect adjacent properties**?
11. Does the road cross section involve a lot of disturbance to **the the natural ground**?
12. Are the design cuts **lopes** stable for the type of strata?
13. Are slope stabilising structure like breast walls, pitching etc. **required**?
14. Does the cut hill face require any special treatment to **prevent slips**?
15. Has the area for clearing and grubbing been clearly demarcated?
16. Has a work schedule been worked out for the different **construction operations**?
17. What erosion control works are required before clearing and **other work** is started?
18. Are any temporary erosion control measures required **between successive** construction stages?
19. Have sediment traps, benches, catch water drains, side drains, **sodding**, ditch paving, slope protection works and other erosion control items been identified on the plans and provided in **the contract**?
20. Have the location and alignment of culverts been fixed with **due consideration** to erosion at outlets and siltation at inlets?
21. Have the necessary erosion control measures been taken at **the outfalls** of culverts?
22. Has the proper disposal of surplus excavated material been **thought of** and provided for?
23. What action has been taken to establish vegetative cover on **cut/fill slopes** and plantings on the disturbed roadside land?
24. Are the existing drainage facilities maintained in good order?
25. Have any inadequacies in **planning, design and construction** been identified and reported to higher authorities?
26. Do any of the design measures require **modification** in the light of field conditions?
27. Do any of the problems require consultation with **specialist organisations** like the CRRI, GSI etc?

No. NHIL/P/44/82

Dated the 22nd July, 1982

To

1. All State Governments
(Deptts. dealing with Roads)
2. DGBR, New Delhi
3. DG (Works), CPWD

Subject : Adoption of prescribed standards for borrowpits for road embankments

It has been observed that in many States the prescribed standards and procedures for borrowpits for road embankments are not being followed. Non-observance of the prescribed standards laid down in IRC-10-1961 "Recommended Practice for Borrowpits for Road Embankments Constructed by Manual Operation", has resulted in deep borrowpits of all shapes very close to the toe of the embankment. This has ultimately developed into deep standing water channels sometime resulting in parallel flow along the embankment, thereby endangering the safety of the road. In locations where widening of the road to four-lane carriageway is to be carried out at a later-date, the deep borrowpits close to the existing embankment have to be filled up resulting in additional expenditure. If at the stage of formulation of the project, the quantity of earth needed and the sources from which the same is to be obtained have been identified with sufficient care, such situations will not arise.

2. A serious view would have to be taken of the instances where the prescribed procedures are not followed. In such cases, the State Governments may be asked hold enquiries for such lapses and fix responsibility and even to compensate an avoidable extra expenditure. State Governments may also consider taking disciplinary action against officials who are not exercising adequate care in following the standards.
3. The contents of this letter may be brought to the notice of all officers handling National Highways and other Centrally funded works.

No. NHVI-50 (3)/83-Part

Dated the 15th April, 1983

To

All Chief Engineers/Principal Engineers of
State PWDs/Union Territories dealing with Highways

Subject : Safety measures dealing with excavation and blasting operations

A number of cases involving accidents including fatal ones during excavation operations in foundations for bridge structures have come to the notice of this Ministry.

2. In the case of minor bridge under construction on a National Highway a few years back when the excavation work for open foundation was in progress and some labourers were inside the pit, the sides of the foundation trench caved in trapping several labourers inside and burying them alive resulting in loss of several lives. Consequently work was suspended for a considerable time which resulted in time over-run in the completion of the bridge and the consequent cost over-run due to price escalation.
3. Recently, in the case of a major bridge on a National Highway where blasting operations were resorted to for excavation in foundation, one labourer was killed and two others were seriously injured at the work site. This happened because one of the charges remained unblasted and went unnoticed with the result that after two days when labourers were working on the work site, the unblasted charge exploded suddenly by itself resulting in the said accident.
4. Though the responsibility of the safety of the labourers and the compensation to be paid to the bereaved family in the event of death in such accidents rests with the contracting agencies, it is also obligatory on the part of the Departmental Officers to ensure that adequate safety measures are adopted by all concerned during such construction works so that precious lives are not lost due to any negligence or lack of safety measures and also increase in cost of the projects on account of the cost and time overruns can be avoided.
- 5.1. It is, therefore, suggested that the excavation for bridge structures is carried out strictly according to

the specifications contained in clause No. 304 of Specifications for Roads and Bridge Works published in May 1978 and safety measures as spelt out therein are scrupulously observed.

- 5.2. Where blasting operations are resorted to, the safety measures and precautions as specified in Clause No. 302 of the above referred specifications shall always be strictly enforced.
6. It is requested that the contents of this letter may please be brought to the notice of all Engineers of the State PWD incharge of execution of bridge works on National Highways and other centrally sponsored schemes in the State PWDs. These safety measures may also be included to form part of N.I.T. for bridge works with a view to ensure their strict adherence by the executing agencies.

305.8

No. NHVI-50 (3)/83

Dated the 23rd April, 1983

To

CEs of all State PWDs and UTs dealing with
N.Hs and other Centrally sponsored roads

Subject : Digging of borrow pits at the rear of the guide bunds for bridges on N.Hs and other Centrally financed roads

During inspection of a bridge work in a State by ADG (B) recently, it was noticed at a bridge site that borrow pits were being excavated on the rear side of the guide bund of the bridge under construction for use in the body of guide-bund.

- 2.1. While designing the layout of the guide bund, the disposition of the worst embankment in the course of the river is taken into consideration, keeping in view the safety of the approach embankment. If borrowpits are dug indiscriminately at the rear side of the guide bunds, it may lead to formation of active channels and even the configuration of the embankment may change, resulting in possible attack of the road embankment as well as the unprotected rear side of the guide bund.
- 2.2. Digging of borrow pits at the rear side of the guide bunds may also lead to piping action in the absence of adequate overburden endangering the safety of the guide bund.
3. Keeping the above aspects in view, it is suggested that digging of borrow pits at the rear side of guide bunds shall be avoided. The fill material for construction of guide bund should be borrowed from the river side of guide bund whenever feasible even if it involves additional lead and lifts. The location in the river bed from where the earth is to be borrowed should invariably be marked and approval obtained from the Engineer-in-Charge of the work.
4. The above observations may please be brought to the notice of all concerned in the State.

305.9

No. NHVI-50 (3)/83

Dated the 6th June, 1983

To

All State Govts. and State PWDs
dealing with NHs

Subject : Digging of borrowpits within the Khadir width of rivers for construction of road embankments as approaches to bridges

Attention is invited to IRC-10-1961 and Ministry's Circular No. NHIII/P/44/82 dt. 22.7.82 with regard to adoption of prescribed standards for borrowpits for road embankments.

2. It has been observed that in certain cases where borrowpits were dug within the Khadir width of rivers, in accordance with the relevant clauses of IRC-10-1961, due to the erodable nature of the bed materials and flow pattern of the rivers, channels have developed flowing parallel to the road embankment endangering the road embankment as well as the bridge.
3. After careful consideration in the Ministry, it has been decided that borrowpits *shall not be dug within the Khadir width of the river* for construction of approach road embankment to bridges on NHs and other Centrally-aided road and bridge projects.
- 4.1. In such of those cases of major bridges where the State PWD consider that digging of borrowpits

within the Khadir width is unavoidable, they are requested to send the following to the Ministry for approval before execution :—

- (i) a detailed plan showing the alignment of road and bridge extending slightly beyond the Khadir width, course of the river in the region and proposed location of borrowpits within the Khadir width.
- (ii) Justification for proposing to dig borrowpits within the Khadir width.

- 4.2. The proposed location of borrowpits shall be as far away from the road embankment as possible and the borrowpits may be arranged in such a manner as not to cause a channel or attract the flow of the main river away from its normal course.
 5. Contents of this letter may please be given wide publicity so as to bring it to the notice of all concerned officers in the State.
-

401 WIDENING OF ROADS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
401.1	NHI-41 (2)/71 dt. 26.10.71	Widening & Strengthening of NHs & Other Centrally Financed Roads- Procedure to be followed as regards Placing & Compaction of different pavement courses over Widened Portions of the Pavement	401/1
401.2	RW/NHIII/P/30/84 dt. 17.10.84	Guidelines for Widening the Carriageway of NHs passing through Urban Areas.	401/1

No. HNI-41 (2)/71

Dated the 26th October, 1971

To

1. Chief Engineers of all State PWDs and Union Territories (dealing with roads)
2. Engineer-in-Chief, C.P.W.D., New Delhi

Subject : Widening and strengthening of National Highways and other Centrally financed roads-Procedure to be followed as regards placing and compaction of different pavement courses over widened portions of the pavement

A large scale programme of widening and strengthening of National Highways and certain other roads under the centrally financed schemes is currently in hand. In a majority of the cases, this entails widening of the existing pavement from single-lane to two-lane width.

2. In this context a number of enquiries have emanated as to the exact manner of placing and compaction of different pavement courses in the widened portions, particularly where widening to be carried out is in narrow widths. It is clarified in this regard that commensurate with the requirement of proper consolidation of the different pavement and shoulder layers, the sequence of operations adopted for construction should generally be along the following lines :—
 - (i) The existing shoulders should be excavated to their full width upto the subgrade level, except of course where the widening specifications envisage construction of a stabilised soil sub-base using in-situ operations, in which case the same would be removed upto the sub-base level only;
 - (ii) Before proceeding with the laying of pavement courses, the shoulders should be rebuilt in layers in reduced width depending on the extent of widening, the compacted thickness of each layer corresponding to the compacted layer of the pavement course to be laid adjacent to it. After compaction, the in-side edges of shoulders should be trimmed vertical and the included area cleaned of all spilled material. The construction of the pavement layer could then follow. This procedure is suggested with a view to ensuring full lateral play of the roller for achieving the desired compaction of the different pavement courses as also the shoulder layers.
3. It is requested that the points brought out above may be kept in view while executing all widening works in future, whether on National Highways or other Centrally financed roads. As far as new works are concerned, necessary provision for carrying out the widening in the manner outlined above should be made in the estimates to be framed for submission to us. As regards works which have already been sanctioned, attempt should be made to cover the extra expenditure involved in adopting this procedure against the provision of contingencies or likely savings in the estimates and permissible limit of excess thereon.
4. It is further requested that the instructions contained in this circular letter may be given wide circulation among all officers in your organisation concerned with the works on National Highways and other roads taken up for improvement under the Centrally financed schemes.

No. RW/NHIII/P/30/84

Dated the 17th October, 1984

To

All the State Chief Engineers dealing with National Highways

Subject : Guidelines for widening the carriageway of National Highways passing through urban areas

The work of improvement of National Highways and National Highway links passing through urban areas requires special attention for providing a properly designed highway facility with minimum hindrance to the public during and after implementation of the improvement works. This calls for adequate advance planning, proper design of various cross section elements, coordination with concerned utility agencies and timely implementation of improvement works. The guide-lines framed for adoption in such cases, by the State P.W.Ds/Highway Departments are described herunder.

2. Alignment Plan & Typical cross section

The alignment plan showing details of the existing road with respect to the road-side developments giving inter alia, the right-of-way available, extra land required for widening, the position of avenue trees, utility lines etc. should be prepared. The proposed improvements may be shown in a typical cross section. The cross section should be designed, avoiding cutting of trees where feasible, ensuring adequate drainage with suitable side drains and proper outfalls and providing separate and fixed space for utility lines, electric poles, under-ground cables etc. At this stage, coordination with the concerned utility agencies is essential.

ial for ascertaining the magnitude of rehabilitation of existing service lines and for providing space in the road consistent with the future development of these services. The master plan of the urban area should also be taken into consideration while formulating road improvement proposals. The proposed alignment plan and typical cross section framed after complying with the above guidelines should be got approved by the Ministry. The work of widening the road may then be carried out in three phases as described hereinafter.

3. *Land acquisition — Phase I*

Wherever additional land is required for road improvements, estimate therefor may be framed, got approved by appropriate authority and then land acquisition completed.

4. *Execution of preliminary works — Phase II*

Once the land acquisition is completed, the work of shifting utility lines electric/telephone poles etc., construction of cross drainage works and ancillary work needs to be undertaken. The estimate for these items should be framed on realistic basis in consultation with other agencies and the work executed expeditiously by maintaining proper coordination

5. *Execution of pavement widening and other connected works — Phase III*

After carrying out the work mentioned in para 4 above, the estimate for the next stage work, namely, additional carriageway, median, footpaths, service roads, street lighting etc. may be prepared and got sanctioned by the appropriate authority and the work proceeded subsequently.

6. While forwarding estimates to this Ministry, only those relevant provisions which are legitimate charge to the NH authorities as contained in the Ministry's circular issued from time to time, need be made. It is requested that all proposals of widening of National Highways passing through urban areas be framed keeping the above guidelines in view and work implemented in phases as explained above.

402 MATERIALS

<i>Code No</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No</i>
402.1	NHIII/P/16/75 dt. 28.6.76	Proper Control Over the Quality of Crushed Stone Aggregates used in Pavement Courses of NHs.	402/1
402.2 303	NHIII/P/16/75 dt. 2.8.76	Test Values of Aggregates intended for use in Pavement Courses on National Highways	See Code No. 303

No. NHIII/P/16/75

Dated the 28th June, 1976

To

Chief Engineers and Addl. Chief Engineers of State P.W.Ds. and
Union Territories dealing with National Highways

Subject : Proper control over the quality of crushed stone aggregates used in pavement courses on National Highways

Crushed stone is mostly used as aggregate for base course and bituminous base/surfacing courses on National Highways. For good performance and durability of these courses, it is essential that the aggregates used are of the requisite quality and gradings. Requirements in this regard are spelt out in the Ministry's Specification for Road and Bridge Works.

2. To ensure that the aggregates used in the works are of the specified quality and gradings, quality control tests are required to be carried out. The tests to be performed in this regard and their minimum frequency are laid down in the Ministry's Specification/I.R.C. Handbook on Quality Control. This Ministry have also been issuing instructions regarding the manner of exercising adequate control over the quality of materials and of works from time to time, the last one being the letter of even number, dated the 17th March, 1976.
3. With a view to clarifying and emphasising further, it may be pointed out that the primary control should be exercised in selecting quarry itself and by stationing staff at the quarry to ensure that the weathered over-burden or the stones of sub-standard quality are not crushed for the supply and carried to the site. The same staff could also carry out some tests for physical properties like Aggregate Impact Value and grading to ensure that the material actually crushed is of the requisite quality. No doubt, additional testing would also be needed at the site of works for secondary control. It is necessary that samples for the tests should be representative of the aggregates to be used, and collected in accordance with the procedure set forth in IS : 2430.
4. It is requested that the contents of this circular may be brought to the notice of all officers in your department engaged on National Highway Works.

403 SUBBASE AND BASE CONSTRUCTION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
403.1	PL-18 (26)/58 dt. 25.4.62	Construction of Stabilised Soil Roads	403/1
403.2	PL-83 (1)/74 dt. 2.4.74	Proper Construction of Water Bound Macadam/Subbase/Base Courses.	403/2

No. PL-18 (26)/58

Dated the 25th April, 1962

To

The State Governments of Uttar Pradesh, Rajasthan,
Madhya Pradesh, Bombay, Bihar, and Andhra Pradesh
(Department dealing with roads)

Subject : Construction of stabilised soil roads

I am directed to say that the Stabilised Soil Roads Committee of the Indian Roads Congress, at its meeting held at Amritsar from the 25th to 27th April 1958, recommended the adoption of stabilized soil in road works in the interest of economy. A copy of the conclusions arrived at by the Committee in regard to the stabilised soil specifications and a copy of the method of stabilised soil road construction referred to therein have already been sent to the State Chief Engineers with the Consulting Engineer (Road Development)'s letter No. PL-18 (26)/58 dated the 27th August 1958. Copies of the conclusions and the method of construction are, however, enclosed for information. I am to add that the Committee stipulated that the stabilised soil specifications referred to above should be considered for adoption only in those localities where the conditions of adoption were specified in the conclusions, where the cost of the crust including surface dressing, was at least 25% less than that of the normal surface treated water-bound macadam specification in force in the area, and where the annual rainfall was less than 60 inches.

2. The Government of India think that stabilised soil specifications referred to above, may be tried in the construction of a few new stretches of road up to a total of 30 miles in length in your State on experimental basis. Preference should be given to those roads where the inhabitants of the area are prepared to donate land free of cost. I am accordingly to request that proposals for the construction of such stretches of road according to those specifications, together with detailed plans and estimates, may be forwarded to this Department for consideration. Complete information about traffic, intensity of rainfall, and the depth of sub soil water level should be given in the report covering the estimate. I am to add that the Government of India will be prepared to consider the sanction of a grant-in-aid from the Central Road Fund (Ordinary) Reserve, to meet 50% of the initial cost on earth embankments and the crust of stabilised soil roads including surface treatment up to a maximum length of 30 miles.
3. The State Government will be required to keep complete and separate records of the specifications and the costs of construction and maintenance of those roads and furnish periodical reports to the Government of India for purposes of research.

Annexure I

CONCLUSIONS ARRIVED AT BY THE STABILISED SOIL ROADS COMMITTEE AT ITS MEETING HELD AT AMRITSAR FROM THE 25TH TO 27TH APRIL 1958 REGARDING THE STABILIZED SOIL ROAD SPECIFICATIONS

- (i) With a two-coat surface treatment over a priming coat, but without stone graft, a stabilized soil road built according to Mehra's method is considered capable of carrying upto 200 tons of mixed* traffic per day;
 - (ii) With a two-coat surface treatment over a stone graft (no priming coat being necessary in this case) a stabilized soil road built according to Mehra's method is considered capable of carrying upto 500 tons of mixed* traffic per day;
 - (iii) Where good hard stone is economically available, a graft should invariably be given even though the prevalent traffic may be less than 200 tons per day. This would allow for development of traffic up to 500 tons per day. The stone ballast used for this purpose should be one inch gauge and the quantity used should be 8 to 10 cft per 100 sq ft, the criterion being complete coverage of the surface with stone ballast.
 - (iv) Where stone is too costly and the traffic is in no case expected to be more than 200 tons per day, grafting may be omitted and a priming coat used instead before surface dressing.
 - (v) Wherever a road is built with stone graft, the other specifications (i.e. with primer only) should also be laid in a short length (about a mile) for observing the comparative performance of the two specifications.
 - (vi) As regards the total thickness of the crust, the Committee was of the view that it should be properly designed taking into consideration the various factors involved like water logging etc. In ordinary cases, the Committee was of the opinion that the crust thickness of a stabilized soil road should correspond in strength to the normal water bound macadam specification prevalent in the locality.
 - (vii) In water logged areas, some form of effective capillary cut-off should be provided, whether by adopting a high embankment, or a sand blanket course, or a bituminous water-proof coating etc.
- Wherever the sub-soil water level was between zero to six feet below the formation level of the road, the area should be considered as water logged.

(viii) The Committee was of the view that the prerequisites for the successful large scale application of the technique of soil stabilization to road construction were :

- (a) availability of personnel trained in the technique for constant supervision
- (b) field laboratory for controlling the execution; and
- (c) a State Testing and Control Laboratory for initial design and reference during execution.

*Not more than one-third should be iron tyred

Annexure II

USE OF SOFT AGGREGATES IN STABILIZED SOIL ROAD CONSTRUCTION METHODS OF EXECUTION AND FIELD CONTROL

1. In the alluvial plains of India, the characteristics of the soil change at short intervals, and therefore, soil samples are taken from points at close intervals to select locations from where the soil is to be borrowed.
2. Soil samples are taken at points a quarter of a furlong apart and 70 ft from the centre line of the road. After removing the top loose soil, soil at one foot depth is sampled; one foot being the specified depth of borrow pits. These samples are subjected to the following laboratory tests :
 - (i) Sieve analysis through No. 10, 40 and 200 American standard sieves
 - (ii) Liquid limit
 - (iii) Plastic limit and plasticity index
 - (iv) Salt content.
3. *Collection of soils* : Soils from approved locations are dug out and collected in stacks in required quantities every half a furlong.
4. *Optimum moisture* : Water calculated to produce the optimum moisture content is measured and is added to the stacks. Allowance is made for evaporation losses and absorption by brick aggregate.
5. *Rolling* : The base and wearing courses are rolled by 8-ton flat power roller. Ten per cent of the aggregate is reserved for sprinkling on the wearing surface before rolling. After the first rolling, water is sprinkled on the road and left overnight. In the morning, the surface is again rolled to finish.
6. *Curing* : The road is kept closed to traffic for four or five days and is heavily sprinkled with water during this period. After this, water is lightly sprinkled for the next ten to fourteen days and controlled traffic is allowed to use the road. In the beginning, rubber-tyred traffic only is allowed and gradually the road is opened to all kinds of traffic.
7. *Specifications for the base and wearing courses* : The thickness of stabilized soil crust shall be the same as that of other types of road in the area. In most of the places where the sub-grade remains fairly dry, a crust of 6 in. thickness of conventional type road has been found satisfactory. Therefore, the following specifications, are recommended for that thickness.

Base course : Thickness-4.5 inches of soil mixture (uncompacted).

Sand content : Not less than 50 per cent (Fraction Passing 40 and retained on 200 U.S. Sieve).

Plasticity Index : 5.0 to 7 (the lower P.I. is to be used where natural soil of the P.I. with the given sand content is available. The higher P.I. is to be used when highly plastic clay is to be added in the Mixture).

Wearing course : Thickness (uncompacted) 4.5 inches of soil and brick aggregate mixture consisting of 8 parts, soil and 4 parts aggregate.

Sand content of soil (-40+200 fraction) : Not less than 33 per cent.

P.I. of soil : 9.5 to 12.3 When the road is to be surface treated, the P.I. shall be 8 to 10. (The upper P.I. to be used when a high plasticity clay is to be blended)

8. Cost per mile : The present day cost of 10 ft wide road per mile is Rs 9,700

Base course 3 in.

Rs 2,700

Wearing course 3 in.

Rs 7,000

Total

Rs 9,700

The cost of unsurfaced water-bound macadam of the same thickness in the same locality would be about Rs 19,600/-.

9. It was observed that except for small stretches totalling a little under 5 per cent of a 17 miles experimental length constructed to the above mentioned specification the entire road behaved very well/and took up a mixed traffic of 200 tons per day though initially it was designed as a village road to take up a traffic of only 50 tons per day. It was observed that the slight rutting that took place during the dry weather got more or less smoothened out automatically under the traffic during the wet weather. So the wear on the road was uniform. Levels both in the centre and along edges were taken for a period of three years and it was observed that the wear on an average was about 0.5-0.6 in. per year.
10. Stabilized soil road with bituminous surfacing : With surface treatment over a priming coat. Roads built to the above mentioned specifications have given satisfactory service for a traffic intensity of about 200 tons per day of mixed traffic in the Punjab. In areas with a heavier rainfall, roads built to the above mentioned specifications should invariably be given a *bituminous surfacing coat*.
11. Stone grafting of base coat : If the wearing course (before rolling) is grafted with stone metal of 1 in. gauge at the rate of 7 cu. ft. per 100 sq. ft. and rolled and surface treated, it has been found to be strong enough for a traffic intensity of 500 tons per day.

No. PL-83 (1)/74

Dated the 2nd April, 1974

To

Chief Engineers/Additional Chief Engineers of all State Public
Works Departments and Union Territories dealing with National Highway works

Subject : Proper construction of water bound macadam sub-base/base courses

Water bound macadam has been the mainstay of road pavements in India. With the probable shortage of bitumen in due course, this position is likely to be reinforced further.

2. Essential principles of construction structurally sound water bound macadam are well-known and have been embodied in the IRC Standard on this subject (IRC : 19-1966), as well as the Ministry's Specification for Road and Bridge Works. Despite this, it has been noticed in certain cases that water bound macadam sub-base/base courses have not been laid properly and this has led to weaknesses in the crust and premature failures. Generally, these defects have been traced to non-compliance with the specifications. To avoid undue pavement distress on this account, it is emphasised that the prescribed specifications should be scrupulously followed on National Highway works in future. The following points may specially be kept in view :
 - (i) Coarse aggregates should strictly conform to the stipulated gradings and quality for hardness and other characteristics;
 - (ii) Screenings/gravel/moorum/kankar modules and binding material to fill voids in the aggregates should be predominantly non-plastic, with PI never exceeding 6;
 - (iii) The prescribed quantities of screenings and binding material should be added such as to fill properly all voids in the body of the WBM layer uniformly and to avoid forming a thick layer of the same at the top;
 - (iv) The water bound macadam layers should be compacted thoroughly till the coarse aggregates are well-bonded and firmly set to their full depth, and
 - (v) At the time of application of bituminous tack coat and wearing surface, the WBM surface should be thoroughly cleaned of dust and other extraneous matter till the skin of stone aggregates gets exposed for proper bond.
3. It is requested that these points may be brought to notice of all officers in your department engaged on National Highway works.

404 BITUMINOUS CONSTRUCTION

<i>Code No</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
404.1.	NHI-41(2)/71 dt. 20.1.71	Specifications to be Adopted for the Construction of Bituminous Macadam Base Courses	404/1
404.2.	PL-10(36)/71 dt. 27.5.71	Bitumen Painting on Wet Surface	404/1
404.3.	PL-30(185)/71 dt. 12.3.74	More Economical Use of Bitumen in Road Works	404/5
404.4.	PL-83(1)/74 dt. 5.8.74	Proper Construction of Thin Bituminous Surfacing like Surface Dressing and Premix Carpets	404/6
404.5.	PL-50(14)/75-SP dt. 31.5.75	Prohibiting the use of Fuel/ Lubricating oil on Roller Wheels while Compacting Bituminous Mixes.	404/7
404.6.	RW/NHIII/P/12/82 dt. 27.3.82	Use of Bitumen Boilers and Mechanical Sprayers	404/7
404.7.	RW/RMP-16(3)/84 dt. 1.1.85	Use of Hot Mix Plant on NH works	404/8
404.8.	D.O. No. RW/PL-30(95)/77 dt. 15.4.85	Use of Anti-stripping Chemicals for Bituminous road works-ANSTRIP, HIQUAT TR 100 etc.	404/9

No. NHI-41(2)/71

Dated the 20th January, 1971

To

The Chief Engineers of all State PWDs and Union Territories (dealing with roads)

Sub: Widening and Strengthening of National Highways and other Centrally Financed Roads—Specifications to be adopted for the Construction of Bituminous Macadam Base Courses

As you are no doubt aware, strengthening and widening of the National Highways pavements, and of certain other highways under Centrally financed programmes, is being taken in hand on a large scale during the Fourth Plan period. In fact a beginning in this direction has already been made with the Annual Plans for 1969-70 and 1970-71. Much of this work will involve the laying of a bituminous macadam base course, followed by application of another bituminous layer to function as the wearing surface.

2. Certain enquiries have emanated in this connection as to the exact specification to be followed for the construction of the bituminous macadam in the base courses. It is clarified in this context that, in general, the "Tentative Specification for Bituminous Macadam (Base and Binder Course)" Published by the Indian Roads Congress in 1967 is to be followed for this purpose. However special attention should be paid to the following points.

- (i) Grading of aggregates should conform to Grading No. 2 given in the above referred I.R.C. Specification for 50/75 mm thickness of bituminous macadam, as applicable. For ease of reference these gradings are reproduced below:—

IRC GRADINGS NO. 2 FOR AGGREGATE FOR THE BITUMINOUS MACADAM

Per cent passing ISI sieve No.	Compacted thickness of bituminous macadam	
	50 mm	75 mm
63 mm (2½ in)	—	100
60 mm (2 in)	100	90-100
40 mm (1½ in)	90-100	35-65
25 mm (1 in)	50-80	20-40
20 mm (¾ in)	—	—
12 mm (½ in)	10-30	5-20
10 mm (3/8 in)	—	—
4.75 mm (No. 4 ASTM)	—	—
2.36 mm (No. 8 ASTM)	—	—
75 micron (No. 200 ASTM)	0.5	0.5

- (ii) It has been observed that, barring any other factors relevant to the conditions obtaining at site, a binder content upto 3.5 per cent by weight of the total mix, usually yields a satisfactory mix for the bituminous macadam.
- (iii) Mixing should be carried out with the help of proper mechanical plant having arrangement for drying and heating of aggregate also,
- (iv) Preferably, mechanical paver-finishers should be employed for the laying of the mix.

3. In respect of (i) and (ii) above however it is mentioned that where in an existing contract for a work, a finer grading for stone aggregates with a higher bitumen content may have been specified the same shall be adhered to. Similarly if in any specific case a different grading for stone aggregates (IRC grading No. 1 or 3) and a different bitumen content are specified for any specific reason in a technical note accompanying sanction to a project, the same shall apply.

4. It is requested that the points brought out above may be kept in view while arranging execution of bituminous macadam work on the National Highways and other roads under Centrally financed projects.

NO. PL-10(36)/71

Dated the 27th May, 1971

To

The Superintending Engineer, N.E.F.A. Circle II, C.P.W.D., Shillong-3

Sub: Bitumen painting on wet surface

This has reference to your office letter No. SEII/WC-5/A/5107-08 dated the 28th April 1971 regarding advice about the carrying out of bituminous painting works on wet surfaces.

2. It may be informed that in response to a similar reference from the then Adviser to the Governor of Assam

we had forwarded to Superintending Engineer, N.E.F.A., a note entitled 'Black-topping on Roads in Hilly Areas', vide d.o. letter No. PL-10(51)/63, dated the 16th June 1964. A copy of that note is enclosed for ready reference, specific attention being invited to its paras 19-28 where black-topping operations under wet working conditions have been discussed.

3. For this problem a number of solutions could be possible like the use of heated chippings, pre-coated chippings or addition of adhesive agents, depending upon the environmental and working conditions at the site. It is hoped that the details spelt out in the enclosed note will be found useful in dealing with the exact problems being encountered in your area. Still, if any clarifications are required, we will be glad to help.

4. It may be added that we are not aware of the compound for bituminous work on wet surfaces developed by a Chandigarh firm, mentioned in your letter under reference.

BLACK-TOPPING ON ROADS IN HILLY AREAS

General

Black-topping is the usual way of referring to all bituminous surfaces, because of their appearance. Under this broad heading would be included a variety of pavements to the types, ranging from the inexpensive, thin surface treatments to the thick dense carpets.

2. Black top pavements consists, essentially, of combinations of mineral aggregates with bituminous binders in various proportions. As with any other construction medium, there can be several combinations of aggregates and binders that will provide a lasting pavement under the given set of conditions. The conditions controlling the design are mostly the external variables of climate and terrain, and to a less extent, the properties of material from which choice is to be made.

The Problems

3. Bituminous pavements have been in vogue for many years in the maintenance and construction of roads in India, both in plains and in the hilly areas. Their more extensive use on hill roads in the recent past has, however, brought forth varied problems. The problems, at times, are created merely through lack of understanding of the interaction of the components of the pavement, and remedial measures lie in the careful selection and control of materials with close supervision at each step of construction.

4. Most problems in hilly areas occur directly on account of the wet and cold climatic conditions obtaining there. In addition to traffic, the newly laid surfacings have to withstand the wear and deformation caused by extremes of temperature, contact with water, and ice, or frost conditions. Water, indeed, is the largest single agent causing deterioration of surfaces in the hilly regions because it has greater affinity than bitumen for stone surfaces. Almost all the corrective measures revolve around elimination of water from the road structure, both at times of actual construction and later during the life of the pavement.

5. Short working seasons are another incidental problem, because of which the working methods have to be suitably adjusted. Questions are also raised frequently in hilly areas as to the timing of black topping operations viz. whether these should commence immediately after the initial formation or wait for 2 or 3 years till the sub-grade gets stabilised.

Timing of Black-topping Operations

6. Considerations as to the timing of black-topping operations are generally the same, be the road located in plains or in a hilly terrain. For roads in fill, it has been usual to let traffic go over it for 2 or 3 seasons if the embankment has not been properly compacted during construction. If, however, the embankment has been compacted fully, layer by layer, to 100% Proctor Density, the pavement can be built straight on completion of the embankment, without risk of failure.

7. Similar considerations apply in the case of a road in cutting. If the sub-grade in the natural stratas compact (i.e. it has 100% Proctor Density) the pavement including the blacktop, could be laid right away. Otherwise the sub-grade must be dug up to a suitable depth and compacted fully before the paving operations are attempted. Same principles have to be kept in mind for the partial cut-fill cross-sections.

8. Mention must also be made here of the measures necessary to avoid wet-weather damage to the newly cut formations in hilly areas when due to short working seasons or other pertinent reasons, laying of pavement has to be deferred till the next season. In this context cohesive soils threw up more foundation problems than the rock subgrades, because wet weather cannot cause any significant damage to the latter.

9. The preservation of a cohesive soil formation under wet conditions becomes impossible if the movement of construction plant cannot be deferred without seriously slowing up progress. The problem may be overcome however by either of the following methods. Either immediately after excavation, a layer of granular stabilised soil, or lean concrete of sufficient thickness to permit the passage of construction traffic without harm to subgrade, should be spread and compacted. Or, alternatively, the desired effect may be achieved by applying a tar or bitumen surface dressing immediately after the formation is prepared. Many of the subsequent black-topping problems can be prevented by these precautionary measures.

10. To ensure trouble free construction, both the key ingredients of black-top, viz., binder and the chippings, must be chosen with care.

11. The binder used may be tar, bitumen, a tar-bitumen mixture, or a cut-back bitumen.

12. In selecting the binder, the two important physical properties to be kept in mind are "adhesion" and "viscosity". Important to a less extent are "brittleness" and "tensile" strength. The binder should then applied be sufficiently fluid to wet the surface and the chippings, it must then set so as to keep the chippings firmly in position. For ease in working, lower viscosity binders would be preferable for the colder climates prevailing in hilly areas. On the other hand high-viscosity binders will resist the stripping action of water better than the low-viscosity types. The use of high-viscosity binders, however, involves the risk that initial coverage of the chippings may be too poor. A mean has thus to be struck between the two extreme positions.

13. For surface dressing work, the most desirable grades of straight run bitumen for hilly areas would be with penetration values from 80/100 to 180/200. For premix carpets, or for grouting, cutback bitumens of the rapid-curing type (say H.c. 3) are more suitable. These stipulations apply equally to care with comparable properties.

14. For surface dressings, tar-bitumen mixtures can also be employed with satisfactory results provided the quantity of bitumen is in the neighbourhood of 10-15% of the mixtures.

15. A word about the comparative performance of tars and bitumens. Though both tars and bitumens are suitable as binder, the phenolic constituents of tar lend it better adhesion properties than bitumen in the presence of water. On the other hand, tars tend to be more brittle in frost conditions i.e. at below freezing-point temperatures.

16. Chippings are no less important than the binder. These should generally be of a clean, tough, hard rock or gravel, though the final choice would depend on local availability and economic considerations. For a long effective life the chippings chosen should exhibit a high resistance to crushing and polishing. Some indication of this tendency can be obtained from the results of the aggregate crushing test.

17. Surface texture of chippings is another vital consideration. The displacement of the binder, particularly in the presence of water, is most rapid with chippings having smooth and glassy or coarsely crystalline texture. Chippings of rough coarse texture should be preferred.

18. As for shape and size, best results would be obtained by employing single size "cubical" chippings. The term cubical is used to describe chippings of the most desirable shape i.e. with relatively sharp edges as produced by crushing, but neither elongated nor flaky. Chippings which are too large are more easily torn away from the road surface by traffic. Too small chippings on the other hand become completely embedded and their use may lead to bleeding and fatting up. The choice of the size of chippings should also take into consideration the expected degree of embedment in the road surface as a result of compaction by traffic.

19. As mentioned earlier, water is the chief cause of deterioration of the black top surfaces in hilly areas. Moisture resulting from wet weather can prevent adhesion of binder to the stone, particularly if the stone is dusty, and can even break down the bond formed in the early stages of a freshly laid surfacings.

20. If the chippings are damp when applied, there is little or no adhesion between the stone and the binder until the film of water has evaporated. Dust on the surface of the stone, particularly if wet, will also greatly delay the adhesion between the stone and the

Choice of
Materials

Effect of Water

binder, and for this reason the risk of premature failure by wet weather is accentuated.

21. Remedial measures against water are discussed under two headings: (1) for surface dressings: and (2) for pre-mix surfacings.

(1) *Surface dressings*: The conditions prevailing during surface dressing on hill roads are particularly conducive to water displacement, for the stone is frequently used in a wet condition. This displacement may be obviated in three ways: namely (1) use of heated chippings; (2) use of coated chippings; and (3) use of adhesion agents.

22. With heated chippings, instant adhesion can be obtained with a binder of any viscosity. However the chippings will cool quite rapidly to the road temperature and should therefore be rolled as quickly as possible. One drawback with the heated chippings is that, during the process of drying and heating, there can be possibility of the production of dust which may interfere with the wetting of the chippings by the binder.

23. The alternative method of coating the chippings with a film of binder, overcomes the problem of dust and is generally more convenient. The essential feature of coated chippings is that they should be easily separable. To this end, a very fluid binder, about 0.75 to 1.00% by weight of chippings, is used to coat cold or slightly warmed chippings. In cold weather, coated chippings can with advantage be applied hot, followed soon by rolling operations. Otherwise these should be spread out in a thin layer to cool before being stockpiled for future use.

24. Adhesive agents can possibly be employed in three different ways: namely (1) by incorporation in binder before spraying (about 1%) (2) by sprinkling a solution on the binder film before the application of chipping (4% to 8% solution in creasote oil at the rate of 140/180 sq. yds. per gallon) (3) by pre-treatment of chippings with a solution of the adhesion agent. Of these the last method has been found to be most practical. The procedure is to coat the chippings in a mechanical mixer with about 1-2 gallons of a solution prepared by adding the wetting agent to creasote at a concentration of about 5 to 8% per 25 cft of chippings. 'Adhevia' T manufactured by M/s Imperial Chemical Industries, Daoneon T, Wet fix or Udol are examples of such proprietary wetting agents in the market.

25. It may be added that the adhesion agents have so far not been used in India on any large scale, and it is possible, their use in hilly terrain may not prove economical at but the most problematic locations.

(2) Pre-mix Surfacings

26. Hydrated lime, portland cement, or any other suitable adhesion agent can be used to assist the coating of cold, wet, aggregates with either tar or bitumen. Any of them may also be used in warm mixed bituminous materials to prevent stripping of the binder from previously dried aggregates. Hydrated lime is the most frequently used anti-stripping agent.

27. For this purpose the binder must contain an acidic constituent such as phenol, and it must be of sufficiently low viscosity to flow round the cold stone. Bituminous cut backs being marketed in India are suitable for this job. But since they do not contain phenolic constituents, addition of any external agent like the Turkey Red Oil or any other sulphonated oil is necessary. For Indian conditions, a mixture of 1.5% of Turkey Red Oil by weight of binder with 1.5% lime by weight of stone aggregate (6 to 10 lbs of lime for 100 sq. ft.) has provided both economical and effective in action.

28. Lime to be used should in the form of a dry powder, free from lumps. Quicklime is not recommended, as surfacings made with mixtures containing quick lime are often not durable. Mixing procedure is to add the lime either as the aggregate is fed to the mixer or immediately after it has entered the mixer. Binder should not be added until the lime is thoroughly dispersed throughout the mix. Projection of hydrated lime could be 1-2% by weight.

Effect of frost

29. Frost conditions may often be experienced at high altitudes when temperatures below the freezing point persist for sufficiently long durations. Low temperatures for only brief periods will not give rise to such conditions normally.

30. Blacktop is not directly affected by the frost, except when considered in relation to the pavement as a whole. Failures from frost occur when there is heaving of the soil due to freezing and thawing of the ground. This heaving leads to loss of bearing strength and

consequential disintegration of the pavement.

Construction
Controls

31. Remedial measures, as far as the blacktop is concerned, would lie in providing a dense hot-mix carpet which will make the surface impervious to outside water. Keeping the crust thickness at least 9 inches and providing a sub-base of coarse-grained material are other important measures which can enhance the life of the blacktop surface.

32. This section describes a few of the familiar construction controls, which can go a long way in the creation of high class blacktop surfaces in the hilly areas.

33. *Preparation of surfaces*: Blacktop obviously cannot restore the riding quality of a surface that has become mishappen. Before the application of blacktopping, therefore, the pavement should be carefully repaired and re-sectioned. Corrugations should be removed and the local depressions made good with suitable materials so that the resulting surface is nearly as good as that of the remainder of the road surface. It would be advantageous too if the surface is dry and is thoroughly cleaned immediately before applying the blacktopping.

34. *Rate of application of binder*: Binder is the most important single factor affecting the life of a blacktop. Its precise rate of spread is a matter of experience, and much can be gained if records and experience from neighbouring stretches in the region are drawn upon for guidance.

35. The quantity of binder should be so chosen that there is no bleeding because of excess, or scabbing because of deficiency. For deciding on the optimum rate, factors such as the size and shape of chippings, the traffic intensity, and the nature of old road surface are important.

36. *Rolling*: The purpose of rolling is to press the stone chippings into good contact with the binder and to flatten the layer of chippings so that it is less prone to disturbance by traffic. With an iron-wheeled roller some crushing of the stone is inevitable but excessive rolling should be avoided since it can cause harmful degradation of the chippings. For surface dressing work, the roller should normally not exceed about eight tons in weight.

37. *Opening the road to traffic*: No traffic should be allowed over the new work before adhesion between the binder and the chippings has taken place. In particular the fast traffic (over 20 miles/h) should be kept off as long as possible, because it imposes horizontal forces on the road that tend to displace the stone on the surface.

38. A surface dressing is in its most vulnerable position when freshly laid, and efforts in keeping the traffic off during the first few hours, or reducing the speed, to say 15 m.p.h., may mean all the difference between success and failure. At many places in India there is considerable hooved traffic. This has to be stopped for some time, or allowed carefully on one side for a few hours, so that the newly-laid surfacing does not get disrupted.

404.3.

No. PL-30 (185)/71

Dated the 12th March, 1974

To

All Chief Engineers of State PWDs dealing with roads.

Subject: More economical use of bitumen in road works

Due to the worldwide oil crisis, it is possible that shortages of bitumen may develop in India in due course. This makes it desirable that henceforth greater care may be exercised in the use of bitumen for road construction or maintenance.

2. Maximum scope for conserving bitumen exists at the stage of choice of specifications. By consciously adopting lower specifications for maintenance, new constructions, or strengthening of existing roads, considerable economy could be generated over the years. After carefully considering the various related aspects, Roads Wing recommend that as far as possible State PWDs should adopt specifications in accordance with suggestions in the Annexure to the letter.

3. Since implementation of these measures will be in national interest, it is requested that the matter may be given due attention and contents of this letter circulated among all concerned in your department.

DESIRABLE SPECIFICATIONS TO ECONOMISE ON THE USE OF BITUMEN IN ROAD WORKS

(a) Maintenance of roads

Both for National Highways and other State roads, renewal maintenance specification should normally be a single-coat surface dressing. Premix carpet and seal coat may be permitted only on heavily trafficked sections and in high rainfall areas.

(b) New constructions

Unless otherwise stated below, base course for none of the road categories should be richer than the conventional water-bound-macadam. Selection of wearing surface should be in accordance with the following suggestions.

Village Roads : These should be blacktopped only in exceptional cases. Where blacktopping is considered inescapable, this should be restricted to a width of 3 metres. Specification used should be a single-coat surface dressing.

Other District Roads : Normally single-coat surface dressing. If necessary, a second-coat may be given in due course.

Major District Roads : Wearing surface should either consist of two-coat surface dressing, or a 2 cm. open-graded carpet with seal coat, depending on traffic and other environmental factors.

State Highways : As for MDRs above.

National Highways : Normally the wearing surface should comprise of a 2 cm. open-graded carpet with seal coat unless heavy traffic and/or high rainfall warrant a richer specification like asphaltic concrete with a bitumen-bound base.

(c) Strengthening of existing roads

For roads other than National Highways, base course for strengthening should consist of water-bound macadam only. surfacing should be chosen *vide* para (b) above.

On National Highways, thickening of crust should be achieved normally with one or more courses of water-bound macadam followed by open-graded 2 cm. carpet and seal coat. Bitumen-bound base courses may be specified only under pressing circumstances when traffic or rainfall conditions so justify.

404.4.

No. PL-83 (1)/74.

Dated the 5th August, 1974

To

The Chief Engineers/Additional Chief Engineers of all State Public Works Departments and Union Territories dealing with National Highways Works

Sub : Proper construction of thin bituminous surfacing like surface dressing and premix carpets

Thin bituminous surfacings like single or two coat surface dressing and premix carpet have been in common use on highways in India for a long time and will continue to be so. Road tests have shown that these specifications if properly executed could provide satisfactory service over long periods. The matter also came up for discussion at the last Chief Engineer's meeting held in May 1974.

2. Principles of laying such surfacings are well known and stand incorporated in the relevant IRC Standards (IRC: 14-1970, IRC: 17-1965 and IRC: 23-1966) as well as the Ministry's Specification for Road and Bridge works. Despite this, it has been noticed at many occasions that these surfacings have not been laid properly and this has led to poor riding quality and avoidable failures. Generally, these defects have been due to non-compliance with the specification and in sufficient quality control. For realising the full worth of thin surfacings on National Highways, it is emphasised that the prescribed specifications should be scrupulously followed in future. The following points deserve to be specially kept in view:

- (i) The base should be prepared to the specified grade and camber and thoroughly cleaned of dust and other extraneous matter. The work should not start when it is raining or the road surface and aggregates are wet.
- (ii) Equipment used should be of appropriate type and in good working order. For instance in the case of spray of bitumen for tack coats or surface dressing, invariably mechanical sprayers should be used.
- (iii) The aggregates should conform to the stipulated grading and requirements for stripping, hardness etc.

- (iv) The binder should be of the specified grade and its quantity for spraying/premixing should be in accordance with the specification;
- (v) Binder for tack coat/surface dressing should be sprayed at the right temperature;
- (vi) Aggregates for surface dressing and seal coat should be spread over binder immediately following the spray of binder on the road and their compaction should follow immediately and be thorough till the aggregates are firmly embedded in the case of surface dressing and seal coat and no roller marks are left in the case of premix carpet;
- (vii) For premix carpet, seal coat of the specified type should be applied immediately after the premix carpet before opening the road to traffic. In the case of surface dressing, traffic should not be permitted to run on the new surface until the following day. If permitted, its speed should be limited to 16 km per hour.
- (viii) Strict control over the quality of materials and work should be exercised through quality control tests. Requisite tests are mentioned in detail in the Ministry's Specification for Road and Bridge Works as well as the Handbook on Quality Control published by the Indian Roads Congress.

3. It is requested that these points may be brought to notice of all officers in your department engaged on National Highways works.

404.5.

No. PL-50 (14)/75-SP

Dated the 31st May, 1975

To

The Chief Engineers/Additional Chief Engineers of all State PWDs and Union Territories dealing with roads

Sub : Prohibiting the use of fuel/lubricating oil on roller wheels while compacting bituminous mixes

The Ministry's "Specification for Road and Bridge Works" prohibits the application of fuel/lubricating oil on roller wheels while compacting bituminous mixes. It has however come to the notice of this Ministry that this practice still persists in certain parts of the country.

2. It is requested that the State Chief Engineers may please take necessary steps to ensure that the said practice ceases forthwith, where the same is still in vogue. For existing contracts, the penalty in such cases should be considered as to be outright rejection of the work done. The contracts to be let out in future should contain a special penal clause to this effect.

3. The contents of this circular may please be given wide publicity among officers engaged on National Highway works. Issue of similar instructions for State works may also be considered.

404.6.

No. RW/NHIII/P/12/82

Dated the 27th March, 1982

To

All State Governments and Union Territories (Depts. dealing with National Highways)

Sub : Use of Bitumen Boilers and Mechanical Sprayers on N.Hs.—Road Works

It has been observed that on a large number of road works on National Highways spraying of bitumen for surface dressing and for tack coat and seal coat for bituminous macadam, asphalt concrete and premix carpet is done using improvised cans etc. Even on the works of built-up spray grout and full grout use of cans is commonly seen. The bitumen spread in this manner does not cover the surface uniformly and it does not penetrate into the interstices to the desired depth. It is also noticed that chips for surface dressing and seal coat are spread manually leading to uneven distribution and resulting in loose chips in the finished surface. Also, heating of bitumen in drums etc., leads to overheating and spillage losses. These invariably result in separation of layers and large-scale distress at an early date.

2. In view of the high cost of bitumen and the consequent need for conserving the same, it is emphasised that for all N.H. works bitumen boilers and mechanical sprayers shall be used. In addition, for surface dressing and seal coat works, gritters should be used. The details of these equipments are given in the IRC publication No. 72-1978 "Recommended Practice for Use and Upkeep for Equipment, Tools and Appliances for Bituminous Pavement Construction".

3. It is requested that these instructions may be conveyed to all the concerned field officers for strict compliance.

No. RW/RMP-16 (3)/84

Dated the 1st January, 1985

To

1. All Chief Engineers of the States and Union Territories dealing with National Highways
2. The Director General, Works, CPWD, New Delhi
3. The Director General, Border Roads, New Delhi

Sub : Use of Hot Mix Plant on National Highway works

It has been observed that sometimes Hot Mix Plants used on National Highway works are not properly equipped with arrangements for gradation control of aggregate, measuring of bitumen and mineral filler feed system which are essential to obtain mix of desired specifications and ensure quality of asphaltic road works.

2. It has, therefore, been decided that while inviting tenders and allotting work to contractors, it may be specified that Hot Mix Plants should conform to component arrangements as per Annexure attached. This should also form part of the contract documents. The work should not be allowed to be executed by contractors, with the plant which do not fulfil these minimum requirements.
3. Similarly, departmental Hot Mix Plants which already have the essential features should be used on works as such, without putting in disuse or removing any of the components.

ANNEXURE

TECHNICAL REQUIREMENT OF HOT MIX PLANT TO BE USED ON NATIONAL HIGHWAY WORKS

Composition of Plant : The Hot Mix Plant shall conform generally to I.S. Specifications No. IS-3066/1965 as amended from time to time and shall be equipped with the following arrangements.

1. **Cold Aggregate Feeder :** The cold aggregate feeder shall have minimum three independent bins or compartment, each provided with accurate mechanical means for feeding the aggregate at a uniform and predetermined rate to the Cold elevator or to some intermediate conveyor or directly into the dryer. The feeder shall provide for the adjustment of total and proportional feed and shall be capable of being locked in any setting.
2. **Dryer :** The dryer shall be capable of continuously agitating the aggregates while heating to desired temperature. At the discharge end of the dryer or any other suitable location, means shall be provided for ascertaining the temperature of the heated aggregate.
3. **Screening Unit and Gradation Control :** The dried aggregate shall be screened into not less than three sizes. The plant shall include means for accurately proportioning each bin size of aggregate either by weight or by volumetric measurement. When the gradation control is by volume, the unit shall include a feeder mounted under the compartment bins. Each bin shall have an accurately controlled, individual gate to form an orifice for proportioning the material drawn from each respective bin compartment. The orifice shall have positive mechanical adjustment and provided with a lock. Indicators shall be provided on each gate to show the gate opening in centimeters.
4. **Mixer Unit :** The plant shall include a mixer of an approved twin shaft pugmill type capable of producing a uniform mix. If not enclosed, the mixer box shall be equipped with a dust hood to prevent loss of fines.
5. **Mineral Filler Supply Unit :** There shall be an independent arrangement to feed mineral filler directly into the pugmill. The hopper to bin for mineral filler shall provide for the adjustment proportion the feed with the aggregate and bitumen feeds and shall be capable of being locked in any setting.
6. **Bitumen Heating :** A heating system for bitumen always with effective and positive control of temperature shall be provided, to maintain proper temperature and for allowing continuous circulation between storage tank and proportioning units during the entire operating period. Suitable arrangements shall be provided for recording the temperature at the tanks and in the circulating system.
7. **Synchronisation :** For synchronization of Aggregate Bitumen and filler feeds satisfactory means shall be provided to afford positive inter-locking control between the flow of aggregate from the bins or compartment, flow of bitumen from the tank and flow of mineral filler.

D.O. NO. RW/PL-30 (95)/77

Dated the 15th April, 1985

To

The Chief Engineers of State P.W.Ds. dealing with roads (by name)

Sub : Use of Anti-stripping chemicals for bituminous Road Works—'ANSTRIP', 'HIQUAT TR 100', etc.

This Ministry has received some literature and laboratory test results with respect to certain antistripping compounds manufactured in this country.

As you are aware that one of the main defects associated with the distress of pavements is stripping. This defect is characterised by separation of bitumen adhering to surface of the aggregate particles in presence of moisture. This may lead to loss of bond and subsequently to loss of strength and materials from the surface. If this defect is not rectified, disintegration of the pavement into small loose fragments will result. The main causes of stripping are: the use of hydrophillic aggregates, continuous contact of water with coated aggregates, presence of dust and/or moisture on aggregates, and occurrence of rain or dust-storm immediately after the construction. In view of these, the IRC has recommended the use of suitable anti-stripping agents with bitumen at the time of construction as a precautionary measure. Some of the above mentioned adverse conditions may be prevalent in your State also.

At present the two anti-stripping compounds manufactured in India which have come to the notice of this Ministry are :

- i) 'ANSTRIP' manufactured by M/s Suvirs (Sales) Limited, 14—Madhya Marg, Sector 7-C, Chandigarh.
- ii) 'HIQUAT TR 100' manufactured by Hico Products Limited, PB 16483, 771 Pt. Satavalekar Marg, Mahim, Bombay-16.

In these times of shortage and high cost of bitumen, it is felt very necessary that such chemical agents could be made use of for effective economic consumption of binder, consistent with strength and stability after detailed field trials.

We will be grateful if you select some reaches both on National Highways and State Highways and carry out field trials for evaluating and assessing the efficiency of these compounds for use in bituminous road works so that this Ministry would be able to consider evolving a code of practice for the purpose.

405 CONCRETE CONSTRUCTION

<i>Code No.</i>	<i>Circular No. and Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
405.1.	RW/RMP-20(5)/85 dt. 26.6.1985	Revival and Introduction of new Concrete Paving Technology	405/1

No. RW/RMP-20 (5)/85

Dated the 26th June, 1985

To

All States/Union Territories Chief Engineers dealing with Roads

Sub : Annual Plans—Revival and Introduction of new concrete paving technology

In view of general shortfall in funds allotted to Road Development, it is imperative that choice of the type of pavement should be made purely on the overall economic consideration than on the basis of traditional practices. Several studies carried out in the Ministry have shown that with present cost structure of materials for highway construction, concrete pavements will be more economical in most cases. It has, therefore, been decided that State PWDs should include cement concrete pavement in atleast some of the projects included in the Annual/Five Year Plan.

2. The choice of section should be based on sound economic analysis spread over life of pavement and sections showing highest economic return should be recommended. For methodology of economic evaluation reference may be made to IRC special publication 30. Other consideration which favour use of cement concrete pavements are :

1. Need for optimum utilisation of scarce resources. Cement concrete pavements require less aggregates than an equivalent flexible pavement thus appreciable savings will result where aggregates are scarce and where loads for carriage are excessive.

2. The increasing cost of bitumen is likely to make bituminous specifications costly. On the other hand production of cement is showing marked improvement and its availability is not likely to be a constraint.

3. Availability of better construction equipment makes it possible to achieve targets of completion and get a good riding surface which results in savings in operational cost of vehicles.

3. The technology of concrete paving has improved considerably over the past decade and new machinery is now available to facilitate rapid construction with control on riding quality. Use of new concrete batch mix plant, conveyors, slip-form pavers, finishers, dowel placing machines, trimmers, can enable laying of quality concrete at relatively low cost. Maximum use should be made of such facilities.

4. It is requested that the State/Union Territories Chief Engineers may kindly examine their plans for future road development and proposals with full economic appraisal be sent to Ministry for sanction. An early action in the matter will be very much appreciated.

406. MISCELLANEOUS GUIDELINES

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
406.1.	NHIII/P/39/78 dt. 16.10.78	Use of Correct Notations for Metric Units	406/1
406.2.	NHIII/P/11/84 dt. 22.5.84	Collection & Spreading of Aggregates on Existing Roads	406/1
406.3. 2600	RW/RMP-18 (3)/84 dt. 20.4.85	Introduction of Vibratory Rollers for Highways Construction	See Code No. 2600

406.1.

No. NHIII/P/39/78

Dated the 16th October 1978

To

All the Chief Engineers of States/Union Territories dealing with National Highways and other roads

Sub : Use of correct notations for metric units

It has been noticed that at many instances improper and incorrect notations are being used for metric units. The most common violation is in the case of 'km' & 'm' where 'KM' is often used to indicate 'Kilometre' and 'M' to indicate 'metre'. Use of notations other than 'm' for metre & 'km' for kilometre, is not as per SIU:-

It is requested that steps may be taken to ensure that only proper & correct notations for metric units are used in the drawings and other references.

406.2.

No. NHIII/P/11/84

Dated the 22nd May, 1984

To

All State & Union Territory Chief Engineers
dealing with National Highway works,
D.G. (BR), New Delhi
D.G. (Works) C.P.W.D., New Delhi

Sub : Collection and spreading of aggregates on existing roads

The normal practice in road pavement construction is to collect and stack the road metal in advance and spread it as and when required for construction. During the intervening period, the metal collects dust, becomes dirty and needs cleaning before spreading. The dust also causes environmental air pollution particularly in the urban areas. This can be avoided by resorting to directly spreading the metal especially when strengthening the existing roads. This incidentally shall check the accident hazards due to stacking of road metal on shoulders as well as curtails the delays in construction and cut down the cost. It is, therefore, suggested that the road metal as far as possible may be directly spread on the roads and suitable instructions may be given to field officers in this regard under intimation to the Ministry. However in respect of new roads the existing practice of advance collection may continue.

500 CULVERTS, CAUSEWAYS AND DRAINAGE

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
500.1.	SP-10 (25)/67 dt. 21.9.68	Approval of Design and Estimate of Causeways	500/1
<u>500.2.</u> 121.2	NH-I-37 (2)/70 dt. 2.4.70	Plan for Development of N.Hs	See Code No. 121.2
500.3.	NHI-41 (18)/70 dt. 12.8.70	Ensuring fluent grade lines at Culverts on N.Hs	500/1
<u>500.4.</u> 604	NHIII/Misc/51/73 dt. 19.10.73	Proper location of Culverts & Bridges and Selection of Appropriate Designs of Parapet/Handrail for these, so that the Structures fit in well with the Roadside	500/2
500.5.	NHIII-33 (126)/72 dt. 5.11.73	Speedy execution of Widening/ Reconstruction of Existing Cross-drainage/Structures	500/2
<u>500.6.</u> 605	NHIII-33 (126)/72 dt. 25.7.74	Arrangements for Traffic During Widening/Reconstruction of Cross-drainage Structures	500/2
500.7.	PL-50 (14)/74-SP dt. 5.9.74	Provision of proper Cross-drainage Facilities across Roads	500/3
500.8.	NHIII/P/1/76 dt. 17.1.76	Use of proper quality RCC Pipes for Culverts on National Highways	500/4
<u>500.9.</u> 145	NHIII/P/9/76 dt. 7.2.76	Construction of Culverts across N.Hs to facilitate crossing of Irrigation Minors and Water Courses	See Code No. 145
500.10.	NHIII/P/1/76 dt. 21.4.77	Supply of Hume Pipes for C.D. Works	500/4
<u>500.11.</u> 1100	NHIV-50 (20)/77 dt. 27.9.77	Fixing Deck Level of Bridges & Culverts	See Code No. 1100
<u>500.12.</u> 302	NHIII/P/35/77 dt. 24.12.77	Ensuring grade lines of Culverts on N.Hs	See Code No. 302
500.13.	NHII/Misc/W/78 dt. 8.2.78	Construction of Pre-cost RCC Box Culverts	500/4
500.14.	NHIII/P/1/76 dt. 30.1.82	Choice, Handling & Laying of Reinforced, Cement Concrete Pipes for Culverts on N.Hs	500/6
500.15.	RW/RD/Misc/19/84-OR dt. Dec. 1984	Details of Reinforcement of RCC deck slabs for culverts using high yield strength deformed bars	500/7

No. SP-10 (25)/67

Dated the 21st September, 1968

OFFICE ORDER

Sub: Approval of design and estimate of causeways

In supersession of all previous orders and instructions on the subject, it has been decided that henceforth the design and estimate of all causeways, bed level or vented, more than 6 metres in length, will be dealt with in the Bridges Directorate.

503.3

NO. NHI-41 (18)/70

Dated 12th August, 1970

To

The Chief Engineer of all State PWDs, and Union Territories (dealing with roads).

Sub: Ensuring fluent grade lines at culverts on National Highways

One of the various deficiencies that exists, at present, on the National Highways is that there are sudden undesirable humps in the vertical profile of the road at locations where there are culverts or other similar structures which cause lot of discomfort to fast traffic and are thus highly irksome. At most of the places, the road level over the culvert is either higher or lower than the general highway profile resulting in humps or dips, generally the former, which are not only hazardous to traffic, but are also aesthetically unpleasant. Such deficiencies in the road profile could be avoided at little extra expense by paying proper attention during the initial design and construction phase or subsequent maintenance operations.

2. Keeping in view the need for having smooth road profiles at culverts and other similar structures, it is necessary that, henceforth, greater care should be exercised in fixation of deck level in the design and construction of culverts and the design of flanking road sections. In this connection the following measures need to be given particular attention.

(A) EXISTING CULVERTS

- (i) Suitable shock free vertical curves conforming to the standards laid down in this Ministry's letter No. NHI-37 (2)/70, dated the 2nd April, 1970 be provided, where necessary, on the approaches to culverts in cases where the deck level has to be higher than the road profile.
- (ii) In the case of slab culverts with C.C. wearing course having flatter camber than that of the flanking road, the difference in the two cambers should be adjusted suitably over a transition length of at least 10 metres on either side of the culvert and the carriageway splayed in this much length to prevent wearing and deepening of the earthen shoulders close to the edge of the C.C. deck slab which can be extremely hazardous.
- (iii) At locations where the culverts lie on horizontal curves/longitudinal grade, necessary super-elevation/longitudinal slope as on the flanking road sections be provided over the culvert deck after ensuring that the culvert is capable of carrying the additional dead load on this account, so that the culvert is in complete harmony with the designed longitudinal and cross road profile in that stretch.
- (iv) All settlements of back-fill at culverts be corrected during maintenance operations.

(B) NEW CONSTRUCTION/RECONSTRUCTION OF CULVERTS :

- (i) The culvert deck should follow the same profile as that of the flanking road sections without any break, whether the same is in level, grade or in a curve. In cases where it is essential to have the culvert deck higher than the adjoining road level, suitable vertical curves should be provided.
- (ii) At locations where the culverts lie on horizontal curves, necessary super-elevation in the road should be provided by laying the deck slab of the culverts to the required cross slope.
- (iii) The camber to be provided over the culvert deck should conform to the camber of the flanking road sections. For achieving this, the deck slab should be laid to the required camber and grade, and the bed blocks laid to suit.

For the operations under (i) to (ii) above the construction must be carried out with requisite care observing designed levels at all stages from foundation laying to the laying of deck.

- (iv) The wearing course over the culvert deck should be of bituminous construction, instead of the rigid C.C. wearing course being sometimes provided, at present.
- (v) The back-filling at culverts should be done with proper soil or other material in accordance with the specifications laid down in this Ministry's letter No. LP 9 (3)/67, dated the 9th June, 1970.

3. It is requested that the above suggestions be strictly adhered to, in future, and necessary instructions in this regard issued to the staff responsible for the execution, of construction works and maintenance of National Highways. Since under the already launched programme of development of National Highways and removal of deficiencies therein and addition of National Highways to the system in future we would be attending to so many culverts for upgrading or improvement or construction it is highly imperative that the above points receive earnest attention. Further, even as part of routine maintenance operations such improvement of bed culvert deck situations should receive serious attention.

500.4

604

NO.NHIII/Misc/51/73

Dated the 19th Oct. 1973

To

The Chief Engineer of All State PWDs and Union Territories (dealing with roads).

Sub : Proper location of culverts and bridges, and selection of appropriate designs of parapet/handrail for these, so that the structures fit in well with the roadside.

The necessity of so locating culverts and bridges that these become an integral part of the road alignment and result in a fluent grade line has been stressed by this Ministry earlier. Copies of Ministry's circular letters No. NHI-41 (18)/70, dated the 12th August, 1970 and No. NHI-40 (3)/71, dated the 29th January 1971 having a bearing on this subject are enclosed for ready reference.

2. Yet, it has been noticed that culverts and bridges in many cases continue to be arbitrarily sited with the result these do not fit in well with the horizontal and vertical profile of the road and undesirable kinks and humps are created in the alignment. To avoid this it is again emphasised that due care should be exercised in locating these structures keeping the overall fluency of the alignment in mind.

3.1. Apart from proper location, the parapets and hand rails of culverts and bridges should be of suitable design so that the whole structure is aesthetically pleasing. The parapets of culverts should be of solid type with approximate dimensions of 400 mm (width) and 500 mm (height) which could be adjusted depending on the materials used.

3.2. For uniformity and good appearance, the handrails for bridges should conform as far as possible to the Ministry's type designs given in drawing Nos. BD/4-69, BD/5-69, BD/6-69, BD/1-71, BD/2-71 and BD/3-71, which have already been circulated amongst the State Chief Engineers. The drawings of '69 series are for bridges without footpaths and those of '71 series are for bridges which have footpaths.

4. It is requested that contents of this circular may be brought to the notice of all officers in your department dealing with National Highway and/or other centrally aided works.

500.5

NO. NHIII-33 (126)/72

Dated the 5th November, 1973

To

Chief Engineers of all State PWDs and Union Territories dealing with National Highways

Sub : Speedy execution of widening/reconstruction of existing cross-drainage structures

When a cross-drainage structure is to be widened or reconstructed, the work ought to be so planned that construction is over in the shortest possible time according to a set schedule. This is important not only for minimising the inconvenience to traffic but also obviating the chances of untoward accidents.

2. Need for the above has been emphasised by the Ministry from time to time, last occasion being the circular letter of even No. dated the 20th March, 1973. In spite of this it has come to notice that due attention is not always being paid to the speedy execution of such jobs. At times the work is started but remains incomplete due to non-availability of required materials, labour or equipment. This causes unnecessary dislocation to traffic and increases the risk of accidents.

3. To avoid such situations, it is again emphasised that improvement of existing cross-drainage structures should be taken up only after full advance preparation. In each case it should be ensured before commencement of the construction that needed materials and equipment have been collected at site. In addition, each job should be completed within a strict time schedule.

4. It is requested that these instructions may be carefully followed in future and circulated among all officers in your Department concerned with National Highway/centrally-aided works.

NO. NHIII-33 (126)/72

Dated the 25th July, 1974

To

The Chief Engineers of State PWDs
and Union Territories dealing with National Highways.

Sub : Arrangements for traffic during widening reconstruction of cross-drainage structures

Your kind attention is drawn to this office letter of even number dated the 20th March, 1973 with which instructions had been forwarded about the arrangements to be made for traffic during widening/reconstruction of cross-drainage structure along the National Highways. It was emphasised therein that while every effort should be made to restore the road for normal use as expeditiously as possible, equally care must be taken to make suitable arrangements for smooth and safe passage of traffic while the improvement works were in progress.

2. Instances have however come to notice that these instructions are not being adhered to strictly with the result that often serious inconvenience has been caused to traffic and given rise to public criticism. It is, therefore, reiterated that the Ministry's instructions on the subject should be rigorously followed and all attendant steps taken to obviate undue delays and inconvenience to the travelling public. For success in this objective, it is requested that officers and staff at all levels in your organisation be made fully conversant with these instructions.

500.7

No. PL-50 (14)/74-SP

Dated the 5th September 1974

To

Chief Engineers of all State PWDs and Union Territories dealing with roads

Subject : Provision of proper cross-drainage facilities across roads

It has been observed that in many local situations, waterlogging and salinity have been caused by lack of adequate cross-drainage works along roads. As a result productivity of land has been affected over a considerable area of the country. This is a serious situation in the context of conserving the national soil and land resources.

2. Apart from other evils resulting from inadequacy of cross-drainage structures, waterlogging is caused at times by roads unduly interfering with the natural drainage of the area, especially in situations where the road alignment runs transverse to the general slope of the ground. In the absence of easy passage, flood water tends to accumulate on one side of the road, leading to a rise in the sub-soil water level. In turn, this creates conditions of waterlogging and salinity with consequent loss in soil fertility.

3. To obviate the above referred difficulties, it is reemphasised that due attention should be paid to the different aspects of cross drainage on National Highways as well as roads in the State as normally also expected in highway planning and construction. The following points for this may specially be kept in view :

- (i) Alignment of new roads should be so fixed that minimum interference is caused to the natural drainage of the area road alignment preferably and wherever possible with due regard to overall economic consideration being located and made to run on ridges and high land, consistent of course as far as possible also with the requirement to achieve short alignment length.
- (ii) Whenever a new road is built, adequate crossdrainage works should be provided right in the beginning, based on a precise study of the hydrological requirements and road formation (pavement subgrade level) kept adequately high providing requisite adequate free board above H.F.L. Advisably, an integrated plan should be devised for long continuous sections rather than piecemeal proposals for short lengths of the road;
- (iii) Generally all roads for constant and quick drainage of road land should be provided with parallel roadside ditches, built to proper levels and gradients which should be continuous, possess adequate capacity, and be appropriately connected to the normal drainage channels serving the area;
- (iv) Along existing roads, where the lack of cross drainage structures is known to have impeded natural drainage, creating condition of waterlogging, early steps must be taken to provide additional waterway at appropriate locations and road side ditches as necessary to relieve the situation;
- (v) Where potential for waterlogging exists, maintenance personnel should pay extra attention to keep the cross drainage structures and road side drains clear of any debris or other obstructions to water flow.

3. It is requested that suitable action may be taken on the above suggestions under intimation to this Ministry. Contents of this circular may please be brought to notice of all officers in your department engaged on road works as also to all other State departments if any handling road construction such as Zilla Prishads, Rural Engineering Works Organisation, Forest Deptt., Irrigation Department etc.

No. NHIII/P/1/76

Dated the 17th January, 1976

To

The Chief Engineers/Additional Chief Engineers of all State Public Works Deptt. and Union Territories dealing with National Highway Works

Subject : Use of proper quality RCC pipes for culverts on National Highways

The Ministry's "Specification for Road and Bridge Works" requires that pipes used for pipe culverts on National Highways should be of NP-3 type conforming to IS : 458. It has however come to the notice of this Ministry that in certain cases the pipes used have not been of the required quality resulting in failures and damage to roads. It is therefore, emphasised that R.C.C. pipes for culverts on National Highways should be carefully checked for conformity with the specification requirements before acceptance.

2. It is requested that the contents of this letter be brought to the notice of all Officers in your department engaged on National Highway Works.

No. NHIII/P/1/76

Dated the 21st April, 1977

To

All Chief Engineers/Additional Chief Engineers of State Public Works Departments and Union Territories dealing with National Highways and Centrally Financed road works

Subject : Supply of hume pipes for C.D. works

It has come to the Ministry's notice that edges of hume pipes get damaged while handling and rehandling of the pipes for use on C.D. works. In certain cases, it has also been observed that the pipes get damaged due to improper handling and rehandling in the factory or during transit from factory to work site.

2. It is, therefore, felt necessary that particular attention is paid by the State Public Works Department officers to ensure that there are proper arrangements for handling and rehandling of the pipes to avoid the damages as indicated above. Further, it is also considered necessary that the State Public Works Department officers carefully examine the pipes in the factory before despatch and ensure that proper arrangements are made for safer carriage of pipes to the site. It is also desirable that during concrete pipe line production runs in factory against any State Public Works Department's specific orders for supply inspections are carried out by the Site Engineers to see that adequate and satisfactory quality control measures have been adopted by the manufacturer. It should also be carefully seen that broken and damaged pipes are not accepted and used on the works.

3. In manual unloading of pipes from trucks, pipes should be rolled down a pair of skids hooked on to the trucks, and the movement controlled with a rope passing round the pipes, back to a rail or station, etc. When loading heavier pipes by mobile cranes, pipes may be lifted with suitable wire rope slings. Hooks should not be used in the ends of the pipes as this procedure may damage the joint surfaces. Pipes may be placed as near to the edge of the trench as safety permits. The method of lowering pipes into the trench will depend on their weight. Small pipes may be lowered by ropes, medium pipes by chain blocks etc., and large pipes by mobile cranes. If no mobile laying equipment is available, heavy pipes may be lowered in the trench by means of a chain block or winch mounted on shear legs.

4. It is requested that these instructions may please be given wide publicity among the concerned officers in your Department.

No. NHII/Misc/W/78

Dated the 8th February, 1978

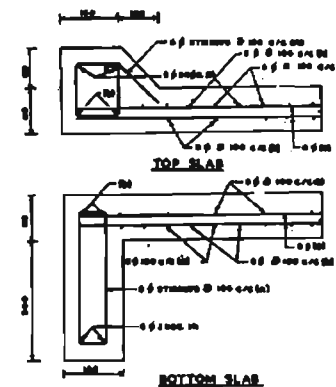
Subject : Construction of Pre-Cast R.C.C. Box culverts

1. The present practice of construction of cross drainage works as per the conventional R.C. slab deck involves massive sections of piers/abutments and foundations. Besides, construction takes substantial time causing inconvenience to the fast moving traffic along the National Highways. As an alternative, pipe

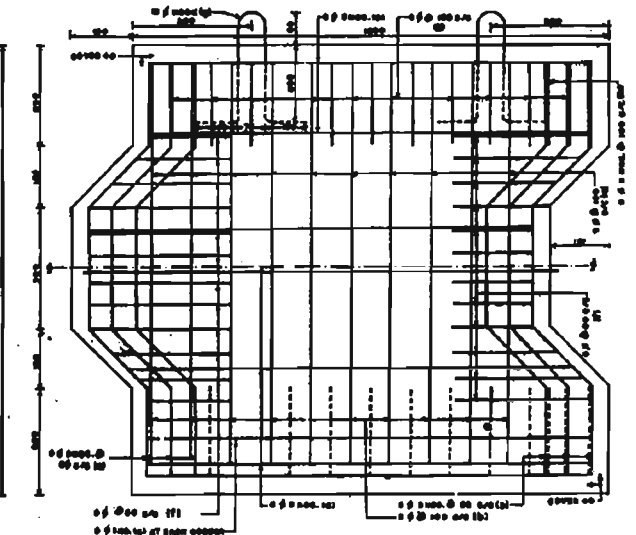
HIGH YIELD STRENGTH DEFORMED BARS

NOTES:-

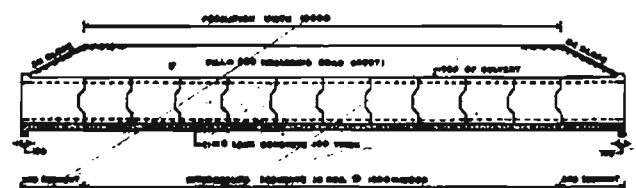
1. CONCRETE SHALL HAVE A MINIMUM 28 DAYS WORKS CURE STRENGTH OF 200 KG/CM² ON 100mm CUBES.
2. REINFORCEMENT STEEL USED SHALL BE HIGH YIELD STRENGTH DEFORMED BARS CONFORMING TO I.S. 830-1966 OR I.S. 1786-1966 WITH LATEST AMENDMENTS.
3. CONCRETE COVER OF 25mm. ON INNER FACES AND 40mm ON OUTER FACES SHALL BE PROVIDED. STRICT QUALITY CONTROL SHALL BE EXERCISED SO AS TO PROVIDE WELL COMPACTED DENSE CONCRETE.
4. THE DETAILS SHOWN IN THIS DRAWING SHALL BE APPLICABLE FOR AN EARTH FILL OF 80 CMS. ABOVE THE BOX CULVERT (INCLUDING ROAD CRUST). IN CASE THE BOX CULVERT IS TO BE USED WHERE EARTH FILLING IS DIFFERENT FROM THE VALUE SPECIFIED ABOVE, THE BOX SECTION SHALL HAVE TO BE CHECKED FOR STRUCTURAL ADEQUACY BEFORE ADOPTING.
5. LEAN CONCRETE (1:1:4) 10 CMS. THICK MAY BE PROVIDED BELOW THE BASE OF BOX CULVERT.
6. THE MAXIMUM PRESSURE ON FOUNDATION 30% BELOW THE BOX WORKS OUT TO 0.5 T/M². THE PERMISSIBLE BEARING CAPACITY OF SOIL MAY BE CHECKED TO ENSURE THAT IT IS NOT LESS THAN THE VALUE SPECIFIED ABOVE.
7. ADEQUATELY DETERMINED RETURN WALLS SHALL BE PROVIDED.
8. ALL DIMENSIONS ARE IN MILLIMETRES.



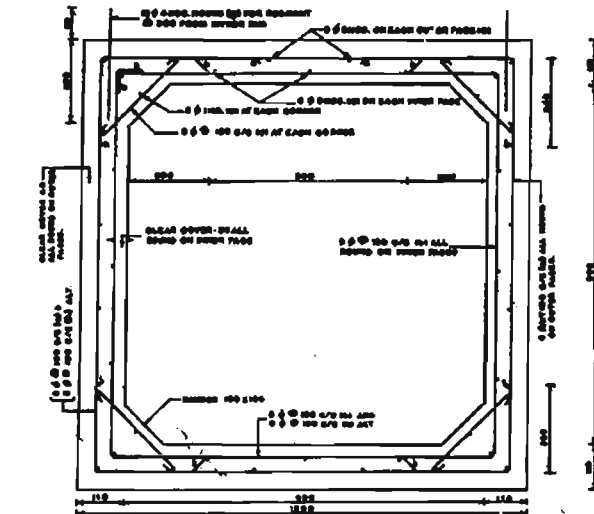
DETAILS SHOWING THICKENING AT THE FREE ENDS OF END SEGMENTS



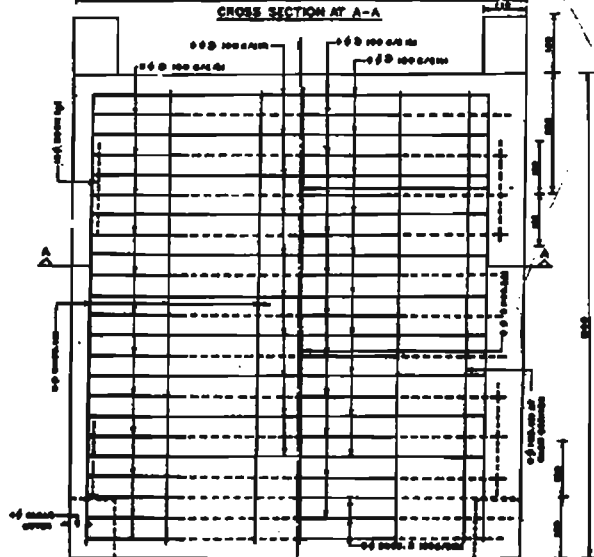
SIDE ELEVATION



CROSS SECTION



CROSS SECTION AT A-A



PLAN SHOWING REINFORCEMENT IN TOP SLAB

PRECAST R.C.C. BOX CULVERT
0.90 M x 0.90 M x 1.2 M. LONG

DRG. No. 50 / 711 DC. 7/77

culverts are being adopted wherever available. These are not only cheaper but quicker to construct, but pipes are not available in all places within economic lead. Therefore a need is being felt for a suitable alternative to pipes which is not only economical, but simple and quicker to construct. The pre-cast R.C. Box culvert is one such alternative.

2. The Tamil Nadu Highway Department have proposed a type design of 0.9 m × 0.9 m and 1.2 m long units of pre-cast box culverts. The proposal has been examined and accepted for adoption on National Highways. The structural aspects have also been scrutinised in the Bridge Standard Zone and a drawing No. DB/Misc/7/77 showing the details of the Box units and cross-section of box culvert has been prepared. A copy of this drawing is enclosed for information and necessary action. This may be adopted whenever found suitable. The drawing is self explanatory. It may be however mentioned here that the permissible value of the bearing capacity of the soil should not be less than 6.5 T/m².

3. The scheme envisages pre-casting the units at a suitable and convenient central casting yard utilising the usual equipments available normally everywhere viz., a mixer, a vibrator and a set of steel mould for casting the units. Thereafter, they are transported to the site whenever required by the usual means and erection is done by manual labour. The erection can be done by tying the unit to a wooden Balli lifted by labourers at either ends. This will not therefore require any extra erection equipment.

4. Suggestions for improvements are welcome and comments may be sent to the undersigned.

500.14.

No. NHIII/P/1/76

Dated the 30th January, 1982

To

1. The Chief Engineers of all State PWDs and Union Territories dealing with National Highways
2. The Director General, Border Roads, New Delhi
3. The Engineer-in-Chief, CPWD, New Delhi

Subject : Choice, handling and laying of reinforced cement concrete pipes for culverts on National Highways

Reinforced cement concrete pipes form a convenient manufactured material for use in highway culverts. Because of their hydraulically efficient shape, amenability for quick and easy construction, and the resulting economy in cost and in quantities of scarce materials like cement and steel, R.C.C. pipes should be used for highway culverts to the maximum extent feasible. Due care, however, is necessary in checking the pipes for conformity with the specification requirements, in handling/rehandling without damage, and in actual laying. In this context, the Ministry had issued instructions to all State PWDs etc, vide Nos. PL-16 (28)/71 dated 28.9.74, and NHIII/P/1/76 dated 17.1.1976 and 21.4.1977. Detailed specifications on the construction of pipe culverts are also contained in clause 2300 of this Ministry's Specification for Road and Bridge Works."

2. In view of the expected large use of R.C.C. pipes for culverts, the following reiterating instructions are issued for adoption by State PWDs etc on all National Highway works :

- (i) As far as possible, R.C.C. pipe culverts should be adopted for culverts instead of an abutment and slab type construction, except in cases where the use of pipes would appreciably disturb the profile.
- (ii) The R.C.C. pipes used should be of NP 3 type conforming to IS : 458.
- (iii) In general, ISI marked pipes should be preferred as this would be a guarantee for quality in terms of the relevant Indian Standard. However, where pipe manufactures in a State have not got the ISI marking facility or where such pipes cannot be procured within economic leads, pipes without the ISI marking might be permitted. For such cases, the pipes should be checked for conformity with the specification requirements before acceptance this can be accomplished by insisting on the manufacturer to provide facilities for testing the pipes in the presence of the Engineer-in-Charge or his authorised representative to check on conformity with the prescribed specifications, and for free replacement if any pipe is found to be of sub-standard quality.
- (iv) It is also desirable that during concrete pipe line production runs in factory against any specific order for supply, the Engineer-in-Charge inspects, the production line to ensure that adequate and satisfactory quality control measures are adopted by the manufacturer. Also, the finished pipes should be inspected by the Departmental Officers for any breakage or defect before permitting despatch to the site. Proper arrangements for careful handling/rehandling of the pipes in the factory or during transit from factory to work site should also be ensured. A copy of the detailed instructions issued by the Ministry in this regard is enclosed for ready reference.
- (v) Laying of the pipe line should be in accordance with clause 2300 of this Ministry's Specification. In particular due attention should be paid to ensure firm and uniform bedding for the pipe and leak-proof sealing of the joints. Also, backfilling upto 0.3 m above the top of the pipe should be carefully done, and the soil thoroughly rammed, tamped or vibrated in 150 mm thick layers. No traffic should be permitted to cross the pipe line unless the fill above the latter is at least 0.6 m.

500/7

3. It is requested that the contents of this circular be brought to the notice of all Officers in your Department dealing with National Highway works.

Enclosures : Not printed.

500.15.

No. RW/RD/MISC./19/84-OR

Dated the December, 1984

To

All State Chief Engineers dealing with National Highways

Subject : Details of reinforcement of R.C.C. Deck-slabs for culverts using high yield strength deformed bars

The need for evolving standard design for R.C.C. deck slabs for culverts using high yield strength deformed bars has been felt for quite some time. In view of this reinforcement, details for deck-slabs upto 6 metre span for culverts on National Highways have been worked out in this Ministry. The same have been shown in a chart form separately for Ordinary Cement Concrete (M-150) and Controlled Cement Concrete (M-200) along with a sketch showing general arrangement of reinforcement. Since, it has been felt that this chart may be useful for day to day work of field engineers also, a copy of the same is enclosed herewith for your reference and guidance.

REINFORCEMENT DETAILS OF R.C.C. SLAB FOR CULVERTS

500.15

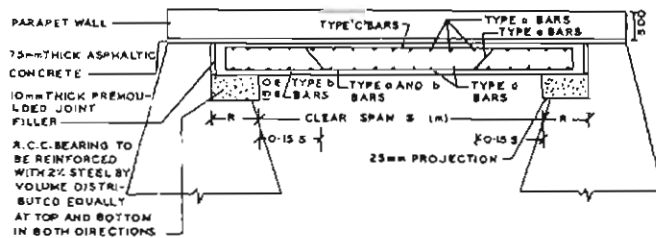
500.15

(USING HIGH YIELD STRENGTH DEFORMED BARS)

LONGITUDINAL - SECTION

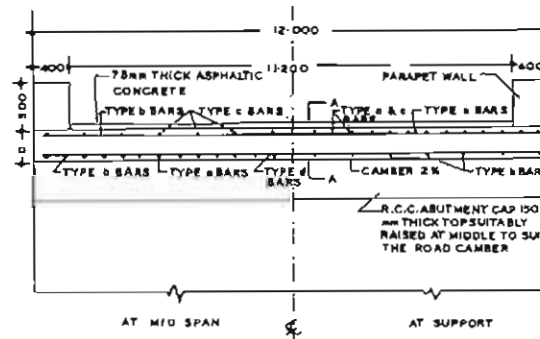
AT - AA

(NOT TO SCALE)



CROSS - SECTION

(NOT TO SCALE)



ORDINARY CEMENT CONCRETE M - 150

CLEAR SPAN OF SLAB S (m)	BEARING LENGTH AT EACH END (mm)	OVERALL LENGTH OF SLAB (m)	OVER ALL SLAB THICKNESS (mm)	STEEL IN LONGITUDINAL DIRECTION										STEEL IN TRANSVERSE DIRECTION										TOTAL QTY. OF REINFORCEMENT PER SPAN IN TONNES INCLUDING 5% FOR LAPS AND WASTAGE	TOTAL QTY. OF CONCRETE PER SPAN IN CUBIC METRES.										
				TYPE 'C' BARS (BOTTOM)					TYPE 'B' BARS (BOTTOM)					TYPE 'A' BARS (TOP)					TYPE 'B' BARS (BOTTOM)							TYPE 'A' BARS (TOP)									
				X					Y					Z					X							Y					Z				
				DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)	Y (m)	Z (m)	2 (X+Y+Z) (m)	TOTAL LENGTH (m)	DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)	Y (m)	Z (m)	2 (X+Y+Z) (m)	TOTAL LENGTH (m)	DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)			Y (m)	Z (m)	2 (X+Y+Z) (m)	TOTAL LENGTH (m)	DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)	Y (m)	Z (m)
1.00	300	1.6	190	10	200	60	0.268	0.198	0.714	1.646	98.78	10	200	60	1.53	0.118	1.768	70.88	12	150	11	11.95	131.45	10	300	6	11.95	71.70	0.340	3.55					
1.50	300	2.1	220	10	150	80	0.304	0.240	1.071	2.159	172.72	10	150	80	2.03	0.148	2.326	93.04	12	150	14	11.95	167.30	10	300	7	11.95	83.65	0.487	5.55					
2.00	300	2.6	250	12	150	80	0.351	0.283	1.428	2.696	215.68	10	150	80	2.53	0.178	2.886	115.44	12	125	21	11.95	250.95	16	300	9	11.95	107.55	0.679	7.80					
3.00	300	3.6	320	12	150	80	0.423	0.382	2.143	3.783	300.24	12	150	80	3.53	0.248	4.026	161.04	12	125	28	11.95	346.55	10	300	12	11.95	143.40	1.018	13.82					
4.00	300	4.6	400	16	150	80	0.493	0.475	2.837	4.793	383.44	12	150	80	4.53	0.328	5.166	207.44	12	125	37	11.95	442.15	10	300	16	11.95	181.20	1.568	22.08					
5.00	400	5.8	450	16	150	80	0.575	0.560	3.571	6.043	483.44	12	150	80	5.73	0.377	6.484	259.36	12	128	47	11.95	561.65	10	300	20	11.95	230.00	1.981	32.02					
6.00	400	6.8	520	16	150	80	0.759	0.643	4.286	7.094	567.52	16	150	80	6.73	0.437	7.604	304.16	12	125	55	11.95	687.25	10	300	23	11.95	274.85	2.682	42.43					

CONTROLLED CEMENT CONCRETE M - 200

CLEAR SPAN OF SLAB S (m)	BEARING LENGTH AT EACH END (m)	OVERALL LENGTH OF SLAB (m)	OVER ALL SLAB THICKNESS (mm)	STEEL IN LONGITUDINAL DIRECTION										STEEL IN TRANSVERSE DIRECTION										TOTAL QTY. OF REINFORCEMENT PER SPAN IN TONNES (INCLUDING 5% FOR LAPS AND WASTAGE)	TOTAL QTY. OF CONCRETE PER SPAN IN CUBIC METRES					
				TYPE 'C' BARS (BOTTOM)					TYPE 'B' BARS (BOTTOM)					TYPE 'A' BARS (TOP)					TYPE 'B' BARS (BOTTOM)							TYPE 'A' BARS (TOP)				
				TYPE 'C' BARS (TOP)					TYPE 'B' BARS (TOP)					TYPE 'A' BARS (BOTTOM)					TYPE 'B' BARS (TOP)											
				DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)	Y (m)	Z (m)	2(X+Y+Z) (m)	TOTAL LENGTH (m)	DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)	Y (m)	Z (m)	2(X+Y+Z) (m)	TOTAL LENGTH (m)	DIA (mm)	SPACING (mm)	NO. OF BARS	X (m)	Y (m)	Z (m)	TOTAL LENGTH (m)				
1.00	3.00	1.6	170	10	180	67	0.288	0.170	0.714	1.530	109.210	10	180	67	1.53	0.098	1.726	69.04	12	128	11	11.95	153.35	10	300	6	11.95	71.70	0.372	3.26
1.50	3.00	2.1	200	12	180	67	0.329	0.212	1.071	2.153	144.291	12	180	67	2.03	0.128	2.265	91.44	12	100	21	11.95	250.95	10	300	7	11.95	83.65	0.810	5.04
2.00	3.00	2.6	240	10	150	80	0.361	0.269	1.428	2.696	215.040	12	180	80	2.53	0.168	2.866	114.04	12	100	28	11.95	310.70	10	300	9	11.95	107.55	0.764	7.49
3.00	3.00	3.6	300	10	150	80	0.443	0.353	2.143	3.735	298.800	16	150	80	3.53	0.217	3.964	159.96	12	100	36	11.95	430.20	10	300	12	11.95	143.40	1.257	12.96
4.00	3.00	4.6	380	12	150	80	0.508	0.467	2.857	4.803	384.240	16	150	80	4.53	0.297	5.124	204.06	12	150	31	11.95	370.45	10	300	16	11.95	191.20	1.564	20.86
5.00	4.00	5.8	430	16	150	80	0.692	0.537	3.571	6.043	483.440	16	150	80	5.73	0.347	6.424	256.96	12	150	39	11.95	466.05	10	300	20	11.95	230.00	2.321	29.93
6.00	4.00	6.8	500	16	150	80	0.772	0.636	4.286	7.102	568.180	20	150	80	6.73	0.405	7.540	301.60	12	150	46	11.95	549.70	10	300	23	11.95	274.85	2.800	40.00

GENERAL NOTES:-

- DESIGN SPECIFICATION I.R.C. STANDARD SPECIFICATION AND CODES OF PRACTICE FOR ROAD BRIDGES SECTION II & III.
- DESIGN LIVE ROAD TWO LANES OF I.R.C. CLASS A OR ONE LANE OF CLASS 70 R (TRACKED) OR WHEELED VEHICLE.
- CONCRETE CONCRETE WITH A MINIMUM 28 DAYS WORKS STRENGTH OF 150 kg/cm² 200 kg/cm² ON 100 mm CUBES FOR CEMENT CONCRETE ORDINARY M150 AND CONTROLLED CONCRETE M200 RESPECTIVELY.
- REINFORCEMENT:-HIGH YIELD STRENGTH DEFORMED BARS CONFORMING TO I.S.1139 OR I.S.1786 WITH LATEST AMENDMENTS.
- COVER:- MINIMUM CLEAR COVER TO ANY REINFORCEMENT SHALL BE IN ACCORDANCE WITH CLAUSE 304-3 OF I.R.C.21-1972.
- BEARING:- THE TOP SURFACE OF ABUTMENT/PIER CAPS SHALL BE GIVEN A SMOOTH FINISH BY CARBORANUM STONE FOR EVEN SEATING OF DECK SLAB.
- NOTES - ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFICALLY MENTIONED.
- JOINTS OR LAPPING OF BARS SHALL BE SUITABLY STAGGERED AS PER CLAUSE 304.6.3 OF I.R.C. 21-1972.
- DIMENSIONS OF BARS APPEARING IN SCHEDULE ARE FOR THE PURPOSE OF ESTIMATING STEEL QUANTITIES.

REFERENCE		GOVERNMENT OF INDIA MINISTRY OF SHIPPING & TRANSPORT (ROADS WING) NEW DELHI	
DRN.		REINFORCEMENT DETAILS OF REINFORCED CEMENT CONCRETE SLAB FOR CULVERTS (USING HIGH YIELD STRENGTH DEFORMED BARS)	
T&D.			
CHK.		RECOMMENDED	APPROVED
		S.E.(R) STD.	C.E.(STD)
			DT. NOV. 84
			DRN. No.
			RD/1-84.

601 **TRAFFIC CENSUS**

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
601.1.	PL-4(11)/68 dt. 10.6.68	Traffic Census on National Highways	601/1
601.2.	PL-4(11)/68 dt. 25.8.72	—do—	601/1
601.3	PL-4(11)/68 dt. 29.6.83	Traffic Census on National Highways- Fixation and Enumeration of Count Stations	601/4

No. PL-4 (11)/68

Dated the 10th June, 1968

To

All the State Governments and
Administration of Union Territories
(Department dealing with roads)

Sub : Traffic Census on National Highways

As the State Government/Local Administration are aware, the Planning Commission has initiated preliminary action regarding the preparation of the new 4th Plan commencing from April, 1969.

3. A matter which needs to be given urgent attention in connection with the formulation of proposals for the development of National Highways during the 4th Five Year Plan is the collection of upto date traffic data with regard to the National Highways in the State/Union Territory.

3. Information available with this Ministry shows that some States are already carrying out traffic counts on different sections of the National Highways. The procedure adopted in carrying out these traffic counts, however, differs from State to State with particular reference to the frequency and the periodicity of such counts. This matter was considered some time back by the Specifications & Standards Committee of the Indian Roads Congress who have evolved a standard procedure and proformae in this connection. A note indicating the broad points to be kept in view while carrying out the surveys is enclosed along with a set of standard proforma. I am to request that immediate action may kindly be taken to have a traffic survey carried out on National Highways and to supply the data, in duplicate, to this Ministry urgently.

4. It is requested that census stations should be fixed with great care after dividing the road into convenient sections, each carrying approximately constant traffic between points of substantial traffic change. In doing so, the regional offices of this Ministry should be consulted, where necessary. In order to secure effective results the State Government will doubtless ensure that these surveys are supervised by qualified and responsible officers.

5. I am to add that the expenditure involved in carrying out the proposed surveys on National Highways may be met from the M&R Grants for National Highways.

6. It is requested that the matter may kindly be treated as "MOST IMMEDIATE".

Enclosures : Not printed since amended

No. PL-4(11)/68

Dated the 25th August, 1972

To

All State Governments and Administration of Union Territories Departments dealing with Roads

Sub : Traffic Census on National Highways

Kindly refer to this Ministry's letter No. PL-4(11)/68, dated the 10th June, 1968, with which a note indicating the broad points to be kept in view and the standard proformae approved by the I.R.C. for carrying out the traffic census on National Highways were forwarded to the States. Since then, certain States have brought to the notice of this Ministry the difficulties experienced by their survey staff while conducting the traffic surveys. These difficulties were placed before the Standards and Specifications Committee of the I.R.C. who after prolonged deliberations have approved the revised proformae for conducting the traffic surveys.

A set of the revised proformae along with a brief note indicating the points to be kept in view is sent herewith, so that the traffic census on National Highways may be carried out as per the revised proformae. The task of conducting these traffic surveys has assumed added importance particularly in view of the advance action pertaining to the 5th Five Year Plan. This will enable us to determine the priorities of the various proposals for development of National Highways like strengthening and widening of the roads, replacing dips by bridges/culverts, constructing bye-passes, over-bridges etc.

It is requested that the census stations should be fixed with great care after dividing the road into convenient sections each carrying approximately uniform traffic between points of substantial traffic change. In doing so, the Regional Offices of this Ministry should be consulted where necessary. In order to secure effective results, the State Governments will doubtless ensure that these surveys are supervised by qualified and responsible officers. The matter may please be treated as *most immediate*.

The revised standard entitled "Traffic Census on Non-urban Roads" is under print, and if required can be obtained direct from the Secretary, Indian Roads Congress, Jamnagar House, New Delhi-11.

NOTE: ENUMERATING THE POINTS TO BE KEPT IN VIEW WHEN CARRYING OUT TRAFFIC CENSUS

1. Traffic census should be done twice in a year. Once during the peak season of harvesting and marketing and again during the off

601/2

season. Each time, the counts should be made for seven consecutive days.

2. Copies of the Proforma to be adopted are enclosed. Form I may be used for recording traffic data in the field and Forms II and III for summarising the same in the office.

3. Traffic census should not generally encompass abnormal conditions of traffic like a fair or exhibition. In such cases the count in the area should be postponed by a few days till normalcy returns.

4. A road should be divided into convenient sections, each carrying approximately similar traffic between points of substantial traffic change. Count stations should be set up for each such section. The limits of the sections could generally be the important towns along the road or major roads intersecting or taking off from the highway in question.

5. For trunk routes serving inter-city traffic the census sites should be fixed well away from all urbanised developments and villages. In particular, sites within zone of influence of towns where there may be regular flow of commuter traffic must be avoided. If need be, additional stations could be fixed for these zones.

6. Every subsequent census should be taken at the same locations. New stations could, of course, be added as and when needed.

7. For the purpose of traffic counts a day may be divided into 3 shifts of 8 hours each and separate enumerators with a supervisor assigned for each shift.

8. Recording should be done for each direction of travel separately. For this the staff should be divided in two parties for every shift.

9. In each hourly column the traffic should be recorded by making tally marks in five dash system (vertical strokes for the first four vehicles, followed by an oblique stroke for the fifth vehicle so as to depict a total of five). Hourly totals should be made at the end of the shift.

10. An index map indicating the location of the census site should be attached to the traffic summary sheets.

11. If considered necessary, the volume of pneumatic tyred and iron tyred vehicles may be recorded in separate columns.

12. The highest peak hour traffic in a day for fast as well as slow vehicles may be highlighted in summary sheets (Plate II) by drawing a firm line in red around the figures in appropriate column.

TRAFFIC CENSUS FIELD DATA SHEET

601.2 PLATE-I

DATE & DAY OF WEEK _____
DIRECTION OF TRAFFIC ^{UP} FROM _____ TO _____
_{DOWN}

ROAD CLASSIFICATION _____
KILOMETRAGE/MILEAGE _____
ROUTE NO. (IF ANY) _____
DISTRICT _____ STATE _____

TYPE OF HOUR VEHICLES OF COUNT	CARS, JEEPS, VANS, THREE WHEELERS ETC.	BUSES	TRUCKS	MOTOR CYCLES AND SCOOTERS	ANIMAL DRAWN VEHICLES	CYCLES	OTHERS (HHS)	REMARKS, INCLUDING WEATHER CONDITION
1	2	3	4	5	6	7	8	9
FROM HRS TO HRS								
HOURLY TOTAL								
FROM HRS TO HRS								
HOURLY TOTAL								
FROM HRS TO HRS								
HOURLY TOTAL								
FROM HRS TO HRS								
HOURLY TOTAL								

NOTES:-

1. RECORD TRAFFIC VOLUME IN COLUMNS 2 TO 8 BY MAKING TALLIES IN THE FORM OF VERTICAL STROKES FOR FIRST FOUR VEHICLES AND DRAWING AN OBLIQUE STROKE FOR EVERY 5TH AS SHOWN WITH BRACKETS (HHS).
2. SOME ROADS CARRY APPRECIABLE VOLUME OF OTHER TRAFFIC LIKE CYCLE RICKSHAWS. RECORD THE VOLUME OF SUCH VEHICLES IN COLUMN 9 AFTER SPECIFYING THE VEHICLE TYPE.
3. THE HOUR OF COUNT SHOULD BE ENTERED BEFORE THE START OF ENUMERATION. PM HOURS SHOULD BE RECORDED AFTER ADDING 12 TO THE ACTUAL HOUR, FOR EXAMPLE 2 PM SHOULD BE RECORDED AS 14.00 HRS.
4. IF FELT NECESSARY BY HIGHWAY AUTHORITY, THIS COLUMN COULD BE SUB-DIVIDED INTO TWO FOR RECORDING THE VOLUME OF "PNEUMATIC-TYRED" AND "IRON-TYRED" VEHICLES SEPARATELY.

NAME AND SIGNATURE OF ENUMERATOR WITH DATE _____
NAME AND SIGNATURE OF SUPERVISOR WITH DATE _____

、結核菌、

TRAFFIC CENSUS
DAILY TRAFFIC SUMMARY

601. 2 PLATE II

FROM _____ HRS ON _____ TO _____ HRS ON _____
DIRECTION OF TRAFFIC FROM _____ TO _____ (UP)
FROM _____ TO _____ (DOWN)

ROAD CLASSIFICATION _____
 MILEAGE / MILEAGE _____
 ROUTE NO. 117 ANY 1 _____
 DISTRICT _____ STATE _____

[illegible]

* 1977-1978 AND 1979-1980

PRICE AND AVAILABILITY OF SPECIALIZED EQUIPMENT

TRAFFIC CENSUS
WEEKLY TRAFFIC SUMMARY

601.2
PLATE-II

FROM _____ TO _____
(DATE) (DATE)
DETAILS OF CENSUS POINT: _____

ROAD CLASSIFICATION: _____
KILOMETRAGE/ MILEAGE: _____
ROUTE NO. (IF ANY): _____
DISTRICT _____ STATE _____

PERIOD				FAST VEHICLES						SLOW VEHICLES				REMARKS
FROM		TO		CARS, JEEPS, VANS, THREE WHEELERS	BUSES	TRUCKS	MOTOR CYCLES & SCOOTERS	TOTAL (COL. 5 TO 8)	ANIMAL DRAWN VEHICLES	CYCLES	OTHERS (SPECIFY)	TOTAL (COL. 10 TO 12)		
DATE	HOUR	DATE	HOUR											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
TOTAL FOR THE WEEK														
AVERAGE DAILY TRAFFIC FOR THE WEEK														

NAME AND SIGNATURE OF
SUPERVISOR WITH DATE _____

No. PL-4(11)/68

Dated the 29th June, 1983

To

All Chief Engineers
dealing with National Highways in
States & U.T. P.W.Ds.

Sub : Traffic Census on National Highways—Fixation & Enumeration of Count Stations

Kindly refer to this Ministry's letters No. PL-4(11)/68, dated 10th June 1968, PL-4(11)/68 dated 25th August 1972 and D.O. PL-19(1)/79, dated 10th August 1979, wherein it has been requested that Traffic Census may be carried out on all National Highways twice a year for seven days at a time and details forwarded to this Ministry in the proformae prescribed for the purpose.

2. It may be recalled that regarding fixation of Count Stations, it was mentioned in letter No. PL-4(11)/58, dated 25th August 1972, as follows :

"It is requested that the Census Stations should be fixed with great care after dividing the road into convenient sections, each carrying approximately uniform traffic between points of substantial traffic change. In doing so, the Regional Officers of this Ministry should be consulted where necessary".

This was also reiterated as Point 4 in "Note Enumerating the Points to be kept in view when carrying out Traffic Census" accompanying that letter, which is reproduced below :

"A road should be divided into convenient sections, each carrying approximately similar traffic between points of substantial traffic change. Count stations should be set up for each such section. The limits of the sections could generally be the important towns along the road or major roads intersecting or taking off from the highway in question."

3. It is presumed that Count Stations on all National Highways in your State have been fixed accordingly for carrying out the required Traffic Census. In case there are still some Count Stations remaining to be fixed, it is requested that immediate action may be taken in consultation with the Regional Officers for fixing the same, wherever required. Thereafter, a complete numbered list of Count Stations as finally fixed along with the map of your State showing the locations of the Count Stations, may please be furnished to this Ministry immediately.

4. This Ministry has decided to go in for computerisation for analysis of traffic data. As a first step, it is essential that Count Stations on all National Highways in your State should be permanently fixed and identified. In view of this, it is requested that immediate action, as mentioned above, may please be taken, and the required information about the Count Stations furnished to this Ministry without delay.

602 ROAD SIGNS AND MARKINGS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
502.1.	PI-80(2)/71-SP dt. 27.7.71	Increased Safety on NHs through Provision of Road Markings and Road Signs	602/1
<u>602.2.</u> 4210	NHIII/P/24/76 dt. 2.4.76	Maintenance of Berms and Road Signs	602/2
602.3.	NHIII/P/24/76 dt. 2.7.79	Indication of Names of Places and Kilometerage at Crossings on NHs in Hindi	602/2
<u>602.4.</u> 603	NHIII/P/24/76 dt. 16.6.81	Script of Information KM Stones & Informatory Sign	602/3
602.5.	RW/NHVI-80(1)/74 dt. 28.7.81	Revision of Traffic Signs	602/4
602.6.	RW/NHVI-80(1)/74 dt. 8.10.82	New Road Signs	602/4
602.7	PL-30(45)/84 dt. 20.10.84	Use of reflective Sheeting for Road Signs	602/5
602.8.	RW/NHVI-80(1)/74 dt. 29.10.84	Revision of Traffic Signs	602/5
602.9.	RW/NHVI-80(1)/74- Vol. II dt. 30.11.84	Centralised Fabrication/Procurement of new Road Signs in the respective Public Works Deptt.	602/6
602.10.	RW/NHVI-50(11)/84 dt. 13.5.84	Use of SCOTCHLITE Reflective Sheeting for Traffic Signs.	602/7
602.11.	RW/NHVI-50(8)/85 dt. 13.5.85	Hot applied Thermoplastic Pavement marking Paint 'HATPROM'	602/7
602.12.	RW/NHVI-80(1)/74 dt. 14.5.85	Revision of Traffic Signs	602/8

No. PL-80 (2)/71-SP

Dated the 27th July, 1971

To

1. The Chief Engineers of all State PWDs (dealing with National Highways)
2. The Engineer-in-Chief, CPWD, Nirman Bhavan, Maulana Azad Road, New Delhi
3. The Principal Engineer, Manipur, Imphal
4. The Chief Engineer (Delhi Admn.)

Sub : Increased Safety on National Highways through Provision of Road Markings and Road Signs

The incidence of accidents on highways in India is amongst the highest in the world. This calls for all possible efforts to relieve the position. Among the measures recognised as having the potential to cause an impact on reduction of highway accident rate, a few important and relevant ones discussed here are: the provision of appropriate road markings and road signs along the highways. Road markings increase safety by making it easier for the drivers to discern the run of the road and to position themselves correctly thereon. Markings are particularly valuable during the hours of darkness when the possibility of accidents to occur is the most. Similarly, cautionary road signs, by forewarning the drivers about approaching hazards, enhance safety of travel. Mandatory and informatory signs perform the same function in their own right.

2. Accordingly, it is considered imperative that in the interest of road safety, a concerted drive should be launched on the National Highways for providing road markings and road signs at all important locations as necessary. Road markings on the National Highways should conform to IRC: 35-1970 "Code of Practice for Road Markings (With Paints)". In the first instance, emphasis should be on providing the following types of road markings along the entire National Highway system :—

- (i) No-passing zone markings;
- (ii) Carriageway width transition markings;
- (iii) Markings at approaches to intersections;
- (iv) Obstruction approach markings;
- (v) Markings on objects within the carriageway; and
- (vi) Markings on objects adjacent to the carriageway :

Among these markings also it might be more rewarding to make a start with markings at the approaches to intersections, in the nature of acceleration and deceleration lanes, traffic lane lines and stop lines, which would be effective in guiding the traffic into the required paths of travel, thereby ensuring greater safety at these vulnerable points which between them claim about a quarter of all accidents on the rural highway network.

3. For the guidance of motorists it is also essential that cautionary road signs such as, "zig zag", "level crossing", "dead end", "narrow bridge" etc., as necessary, should be put up all along the National Highways. It is the experience that these signs are presently non-existent even at many of the confirmed accident-prone spots. Cautionary signs, as regards their shape, colour scheme and location, should be strictly in accordance with the publication "Traffic Signs" brought out by the Indian Roads Congress.

4. The role of mandatory and informatory signs is no less important in this context. These signs should be set up at all important locations in conformity with the publication "Traffic Signs" cited in the preceding paragraph. Among informatory signs, special attention deserves to be paid to the provision of road junction approach signs about which detailed instructions had been conveyed by the Ministry *vide* its letter No. SP-77 (7)/59 dated the 7th January, 1960, and which have been reiterated at several occasions since.

5. It would be desirable, for an effective pursuit of these requirements, to list up all the deficiencies requiring to be made up location-wise and then to speedily plan and arrange for their removal.

6. It is important that once the road markings and cautionary signs are established these should be kept well-maintained and renewed periodically as required. This could easily be ensured by instituting a system of regular checks, perhaps at quarterly intervals. Obliterated markings and signs not only spoil the appearance of the highway but also could misinform the drivers about the message intended to be conveyed. The expenditure incurred in connection with the provision of markings and signs is chargeable to the Maintenance and Repairs Grants for the National Highways; therefore there should be no difficulty on that account.

7. We will appreciate an early reply from you intimating the steps being taken for implementing the desired programme.

No. NHIII/P/24/76

Dated the 2nd April 1976

To

1. All State Governments & Union Territories (Departments dealing with National Highways)
2. All Chief Engineers/Addl. Chief Engineers of State P.W.D's dealing with NH's and Centrally financed works

Sub : Maintenance of berms and Road Signs

It has come to Ministry's notice that pavement edges and road shoulders and road signs are not being maintained properly on many of the National Highways. In the norms for maintenance circulated vide, Ministry's letter No. NHI-41 (6)/69 dated 24th July 1969, scope of ordinary repairs included proper upkeep of road pavement and shoulders and maintenance of road signs. Adequate funds for this purpose are also being released by the Ministry every year. It is, therefore, necessary that particular attention is paid by the States to ensure that pavement edges and road shoulders are kept well maintained. This aspect would need a higher degree of attention in the case of single lane carriageway and also to some extent in case of double lane carriageway till the programme of double laning of all National Highways is accomplished.

2. The requirement of putting up adequate approved road signs has been brought to the notice of the State Governments/PWD by the Ministry from time to time vide its letters Nos. SP-77 (9)/58 dated 3rd July 1959, SP-77 (7)/59 dated 7th Jan. 60, SP-77 (27)/60-Pt dated 6th March 70, PL-30 (128)/69 dated 9th April 70 and PL-80 (2)/71-SP, dated 27th July 1971 and special emphasis made at various Chief Engineers Meetings. Inspite of this there is a continuing impression that National Highways are throughout deficient in road signs. It is therefore necessary that State Governments/PWDs devote particular attention to plan and put in all out efforts for making up this deficiency expeditiously. Expenditure required for the purpose may be met either from maintenance grant or from capital works head by having separate estimates sanctioned or by debiting to provision for contingencies of sanctioned development works estimates as is appropriate. In this context it may be noted that the Ninth Schedule of Motor Vehicles Act which contains the standard signs is under revision and revised sign system is expected to be notified soon. Care may be exercised to see that all new signs conform to the revised sign system. IRC is also preparing a Code of Practice for Road Signs which may be referred to for guidance regarding warrants, placement etc.

3. It is requested that the deficiencies and progress made in installing adequate signs may be intimated to the Ministry.

No. NHIII/P/24/76

Dated the 2nd July, 1979

To

1. All State Govts. and Union Administrations (Departments dealing with Roads)
2. All State Chief Engineers/Addl. Chief Engineers of State P.W.Ds. dealing with Roads

Sub : Indication of names of places and kilometerage at crossings on National Highways in Hindi

I am directed to say that the Hindi Salahakar Samiti of the Ministry has at its recent meeting brought to the Ministry's notice the fact that at many places informatory signs did not give information in Hindi, English and local language and often did not indicate the distance to important places. The Ministry has time and again emphasised this requirement to the State PWDs in writing and at various Chief Engineers meetings. The type design of the informatory signs was initially circulated by the Ministry vide letter No. SP-77 (7)/59, dated 7th January, 1960.

2. In view of the deficiencies now pointed out, I am to request that it must be ensured that adequate signs are provided at all intersections and the names of places on road signs at crossings on National Highways are invariably inscribed in Roman characters, Hindi (Devnagari Script) and the local language(s). The distance to places must, henceforth, also be shown and indicated in International numerals on these sign-boards.

3. It is requested that deficiencies in this respect should be made good on priority basis and small cost involved met out of the 'Maintenance Grant'.

4. It is hoped that similar action will be taken by the State Govts. in regard to other roads in the State.

5. These instructions may please be circulated to all field formations, under intimation to this Ministry.

No. NHIII/P/24/76

Dated the 16th June, 1981

To

1. All State Governments & Union Territories
(Departments dealing with Roads)
2. Director General (Works) CPWD
3. Director General Border Roads

Sub : Kilometre stones and informatory signs on National Highways-Script of information and form of numerals policy regarding

In supersession of this Ministry's circular letters indicated below, I am directed to forward herewith consolidated instructions on the subject mentioned above for your information and compliance.

1. No. SP-77 (27)/60 Pt. dt. 6.3.70
2. PL-30 (53)/74 dt. 15.7.76

I. Kilometre stones

(i) According to the revised standard on the subject which is currently under print, the place names should be inscribed on these stones in different scripts in the following sequence, only one script being used on any one kilometre stone. The sequence given below is different from the one being followed in the country up till now.

Km. No.	Script for place names	Place to be shown
0	Roman	Terminal/starting station and next important town
1.	Hindi (Devnagri script)	Next important town
2.	Local Language	-do-
3.	Hindi (Devnagri script)	Terminal Station
4.	Local Language	-do-
5.	Roman	Terminal/starting station and next important town
6.	Hindi (Devnagri script)	Next important town and so on, repeated in the same order

Where local script happens to be same as Devnagri, kilometre to the next important town and the terminal station on ordinary kilometre stones could be shown alternately instead of the order given above. The numerals on kilometre stones shall in all cases to be written in international form of Indian numerals i.e. 1,2,3 etc.

(ii) In the interest of travellers' convenience, States are requested to follow the same policy in respect of kilometre stones on State Highways.

II. Advance information signs at approaches to junctions.

(i) As regards advance information signs at approaches junctions, the following procedure and guidelines may be followed:

- (a) All boards should invariably be inscribed in Roman and Devnagri scripts.
 - (b) In States where the script of the State language is not Devnagri, the inscription should be made in the script of the State language also.
 - (c) In a bilingual area on the border of two States, the inscription should also be in the scripts of both the States languages if these are not Devnagri.
- (ii) The State Govt. are requested to adopt the above policy for general information signs on State Highways also to avoid inconvenience to road users and tourists.

2. The State Govts. are requested to check up the position on all National Highways and ensure that Km stones and informatory signs are installed in accordance with the above procedure. Deficiencies, if any, should be removed immediately as desired by the Parliamentary Committee on Official Language for promotion of Use of Hindi.

3. Expenditure on removal of the above deficiencies may be met from the maintenance and repairs grants released to the States from time to time.

No. RW/NHVI-80 (1)/74

Dated the 28th July, 1981

To

The Chief Engineers of all State PWDs & Union Territory Administrations dealing with National Highways

Sub : Revision of Traffic Signs

Kindly refer to this Ministry's Notification dated 3rd June, 1981 (F. No. 14-T (1)/71-Vol. III) copies of which have already been sent to all the State Governments and Union Territory Administrations. A copy of the same is enclosed herewith for ready reference. Introduction of the new signs has to be completed before the 1st of June, 1985. In order that this task can be carried out in a planned way, the State authorities should immediately take stock of the situation and make a realistic programme.

2. The plan of action should be generally on the following lines :—

- i) All new signs to be erected henceforth should be only as per the revised road signs.
- ii) Existing damaged or worn out signs which require replacement or repainting should show only revised signs when replaced or repainted.
- iii) The conversion of the remaining existing signs should be phased to be completed before 1st June, 1985.

Work falling under categories (i) and (ii) should be included in the first phase works and those under category (iii) as second phase work. Attempts should be made to complete the first phase works by December, 1983 and second phase works before the 1st June, 1985.

3. The work under category (i) should be covered by proper estimate sanctions from NH original works. Works mentioned under category (ii) and (iii) should be carried out under Maintenance and Repair grants. For erection of signs under (ii) and (iii) which can not be covered by Maintenance & Repair grant, the cost may be estimated by the PWD in close association with this Ministry's ROs/ELOs and intimated to this Ministry.

Encl : Not printed

D.O. No. RW/NHVI-80 (1)/74

Dated the 8th October, 1982

To

The Chief Engineers of all State PWDs & Union Territory Administrations dealing with National Highways

Kindly refer to this Ministry's Notification dated 3.6.1981 (File No. 14-T (1)/71-Vol. III) regarding the introduction of new road signs in conformity with the Vienna Convention as amended in the Ninth Schedule of the Motor Vehicles Act, 1939, copies of which have already been sent to all the State Governments and Union Territory Administrations. A copy of the notification was also sent to you with this Ministry's letter of even number dated 28.7.1981 intimating that the introduction of the new road signs has to be completed before 1.6.1985. In order that this task is carried out in a planned way, the State authorities were requested to take immediate stock of the situation and make a realistic programme.

2. The plan of action suggested was on the following lines :

- i) All new signs to be erected henceforth should be only as per the revised road signs.
- ii) Existing damaged or worn out signs which require replacement or repairing should show only revised signs when replaced or repainted.
- iii) The conversion of the remaining existing signs should be phased to be completed before 1.6.1985.

Work falling under categories (i) and (ii) should be included in the first phase works and those under category (iii) as second phase work. Attempts should be made to complete the first phase works by December, 1983 and second phase works before 1.6.1985.

3. The work under category (i) should be covered by proper estimate sanctions from National Highway original works. Works mentioned under category (ii) and (iii) should be carried out under Maintenance and

Repair grants. For erection of signs under (ii) and (iii) which can not be covered by Maintenance and Repair grant, the cost may be estimated by the PWD in close association with the Ministry's Regional Officer/Engineer-Liaison Officer and intimated to this Ministry.

4. I may add that the Indian Roads Congress have already brought out their publication No. IRC : 67-1977 on the Code of Practice for Road Signs, which are as per the amendment carried out in the Ninth Schedule of the Motor Vehicles Act. Copies of the Code of Practice for Road Signs, priced @ Rs 50/- per copy (plus postage and packing charges) may please be obtained direct from the Indian Roads Congress, IDA Building, Jamnagar House, Shahjahan Road, New Delhi-11, for dissemination and guidance in your organisation at all levels.

5. I shall be grateful if a report on the progress achieved so far in setting up new road signs on the various NH stretches in your State and the future plan of action is sent to us immediately and in any case not later than 15.12.1982.

602.7.

No. PL-30 (45)/84

Dated the 20th October, 1984

To

The Chief Engineers of all States and Union Territories dealing with Roads

Sub : Use of Reflective sheeting for Road Signs

A representative of Seibu Polymer Chemical Company Ltd. of Japan, manufacturing reflective sheeting under the brand name 'Seibulite' has approached this Ministry for introduction of this material for use in traffic signs in India. Seibulite is stated to be a special plastic sheet material having high retro reflectivity of light and is designed for use mainly on traffic signs. It is reported that such traffic signs are attractive in appearance, easier to see during the day as well as the night and contribute greatly to safer driving. It is also reported to be designed to resist all forms of severe weathering conditions for many years. Seibulite is available with two types of pre-coated adhesive—"Heat Activated" and "Pressure Sensitive" and in seven colours namely white, yellow, red, blue, orange, green and brown. It is claimed that Traffic signs of reflective sheeting are already being used in many countries such as USA, UK etc. and the material is now under Open General licence for import.

As stated by the representative, the reflective sheeting could be used for traffic signs, road delineators, road markings, safety triangles etc. Though this material appears to have a promising future potential, its suitability, durability and economics etc. is required to be examined in Indian conditions before considering for general adoption. For this purpose, you may like to consider using this material on an experimental basis, whenever a new sign is to be put up and monitor its performance.

For any further information and details regarding this material i.e. its specifications, mode of application, availability, price etc., you may contact Shri D.S. Malgonkar the representative of Seibulite in India at C-2 Beach House Society, Gandhi Gram Road, Juhu, Bombay-400 049. Incidentally, Mr. Malgonkar, in association with representatives from the manufacturers from Japan, hopes to demonstrate 'SEIBULITE' at the Technical Exhibition at Lucknow during the IRC Golden Jubilee seminar from December 8 to 13 this year.

602.8.

No. RW/NHVI-80 (1)/74

Dated the 29th October, 1984

To

All the Chief Engineers of State PWDs and Union Territory Administrations dealing with National Highways

Sub : Revision of traffic signs

Suitable instructions regarding the introduction of new road signs, in conformity with the Vienna Convention as amended in the Ninth Schedule of the Motor Vehicles Act, 1939 (copies of which have already been sent to all the State Governments and Union Territory Administrations), were communicated to you vide Ministry's letter of even number dated the 28th July, 1981. In order to achieve the stipulated target of installation of these signs before the 1st June, 1985, the suggested plan of action *inter alia* provided for the following measures :—

- (i) All new signs to be erected henceforth should be only as per the revised road signs.

- (ii) Existing damaged or worn out signs which require replacement or repainting should show only revised signs when replaced or repainted.
- (iii) The conversion of the remaining existing signs should be phased to be completed before the 1st June, 1985.

The above referred circular stipulated that works falling under categories (i) and (ii) above should be included in the first phase work and those under (iii) should be categorised as second phase works. While the works under category (i) were required to be covered by proper estimate sanctions as National Highway original works, those under (ii) and (iii) were required to be carried out under Maintenance and Repair grants.

Whereas the prescribed procedure for erection of new road signs covered under category (i) as National Highway original works still stands, the position regarding replacement of signs under categories (ii) and (iii) through Maintenance and Repair grants has since been reviewed. Considering the gross inadequacy of the Maintenance and Repair grants, even to cope up with the fast deteriorating condition of the National Highways, non-feasibility of meeting the extra cost of replacement of damaged/worn out or existing signs from these meagre grants has been voiced, from time to time, by all concerned. It has, therefore, been decided that henceforth the cost of replacement of road signs covered under categories (ii) and (iii) will also be treated as original works for which separate provision can be made in the Seventh Five Year Plan. Moreover, since the target date of 31st May, 1985 stipulated for installation of new signs cannot be adhered to in view of marginal progress so far achieved in this direction, the target date for complete switch-over to the new sign system has been extended to 1st June, 1987 so as to be on a realistic basis.

In view of the revised procedure and targets for introduction of new road signs, as indicated above, you are requested to identify the work requirements and make appropriate provision in the respective annual plans so as to complete the work of erection of new signs in a phased manner by 1st June, 1987. With this objective in view suitable proposals and work estimates sub-grouped into categories (i) to (iii) may please be furnished National Highways wise on the basis of Annual Plan provisions.

In order to facilitate framing of these proposals and procurement/fabrication of the new road signs, the newly created Traffic Engineering Cell in your State could be fruitfully utilised. For achieving uniformity and standardisation in introduction of new signs, you may like to consider going in for centralised procurement/fabrication of these signs.

With a view to ensure that the complete switchover to the new sign system is completed by the revised target date, close monitoring of the progress of the work in terms of sections of the National Highways in each State is deemed necessary. For this purpose, the Traffic Engineering Cell of the State Public Work Departments may please be associated and quarterly targets for various phases of the work drawn up and the Traffic and Transportation Cell of the Ministry kept posted with the quarterly progress achieved.

602.9.

No. RW/NHVI-80 (1)/74-Vol. II.

Dated the 30th November, 1984

To

All the Chief Engineers of States and Union Territories dealing with National Highways

Sub : Centralised fabrication/procurement of new road signs in the respective Public Works Departments

It is understood that the new road signs are at present being procured directly by the respective field divisions of the State Public Works Departments. This procedure inevitably leads to non-uniformity and lack of requisite quality control with regard to the specifications. It is felt that centralised fabrication and procurement of new road signs under the control of the State Chief Engineer will go a long way in achieving the desired objective of uniformity and standardisation. The envisaged procedure will also obviate duplication of effort by the various field formations in this direction with resultant speedy implementation of complete switch-over to the new sign system by virtue of a better inventory control and coordinated action. The Traffic Engineering Cells functioning in the State Chief Engineers' offices could be fruitfully utilised for this purpose. The site requirements of the road signs may be assessed by the field formations and a requisition placed with the Traffic Engineering Cells who could arrange fabrication/procurement for supply to the field divisions for installation. The suggested procedure will afford better quality control as well as enable timely and coordinated installation of the new road signs.

The proposed system of centralised fabrication/procurement of the road signs is being extensively followed by the advanced countries like U.S.A. where departmental fabrication of the road signs is being carried out by the traffic engineering workshops of the Departments of Transportation of different States. These workshops are centrally controlled and cater to the requirements of various field formations of the entire State. Adoption of similar procedure in this country will thus be in line with the techniques in vogue in the developed

countries and is being advocated in view of its obvious advantages. Your views with regard to the above suggested procedure concerning centralised procurement of road signs are, therefore, solicited alongwith the action contemplated to be taken at your end.

602.10.

No. RW/NHVI-50 (11)/84

Dated the 13th May, 1985

To

The Chief Engineers of All States and Union Territories dealing with Roads

Sub : Use of SCOTCHLITE Reflective sheeting for traffic signs

Subsequent to the issue of this Ministry's letter of even number dated the 20th Oct. 84 addressed to you, concerning the use of Reflective sheeting under the brand name 'Seibulite' for Road signs, another supplier named 'Sujathas' of Madras has approached the Ministry, introducing themselves as an SSI Unit fabricating Reflective Traffic Control Products from the internationally acclaimed SCOTCHLITE reflective sheeting made by 3 M of America and claiming representation as their Distributors and being the only unit in the country that has acquired machinery for bonding reflective material on to sign blanks by the Heat Lamp Vacuum Application method.

As claimed by the distributors of this material, Scotchlite Reflective Sheeting High Intensity Grade is a bright, durable, flexible retro-reflective sheeting, designed for the production of Traffic Control devices. The sheeting is stated to consist of special lens elements (glass beads) adhered to a **synthetic** resin and encapsulated by a flexible transparent plastic having a smooth outer surface. Signs made of this material are said to assure optimum visibility by day and at night and when exposed to a light source these can be seen from a great distance whether dry or totally wet. The effective performance life of the material is claimed to be eight years under normal, vertical, stationary, exterior exposure conditions and seven years in desert regions. The material is reportedly being introduced by the supplier with a view to improve safety standards on the Roads/Railways, in particular to eliminate accident hazards due to poor visibility of signs and signals.

In view of the claimed advantages of using Scotchlite Reflective Sheeting for traffic signs and its future potential for wide application, suitability, durability and economics etc. of the product is required to be examined under Indian Road Traffic and environmental conditions before advocating its general adoption. With this objective in view, you may like to give this material a trial on an experimental basis monitor its performance and furnish necessary feedback to this Ministry regarding its suitability.

For any further query and information regarding specifications, mode of application, availability, price, schedule of delivery, demonstration etc. concerning this material, you are requested to get in touch with 'Sujathas', Traffic Control Products Division, 58, Pantheon Road, Madras-600008. Reflective traffic signs are already stated having been fabricated and applied to National Highways, Highway Corporations of various states, various other Govt. bodies and Indian Railways.

602.11.

No. RW/NHVI-50 (8)/85

Dated the 13th May, 1985

To

The Chief Engineers of All States and Union Territories dealing with Roads

Sub : Hot applied thermoplastic Pavement marking paint "HATPROM"

M/S Recondo Limited, Bombay, have approached this Ministry advocating the use of thermoplastic pavement marking paint, indigenously manufactured by them under the trade name "HATPROM", for use in road markings. The product, backed up by the firm's research and development activities since 1972, is claimed to conform to British Standard 3262 relating to hot-applied thermoplastic road paint and using local materials available within the country. For achieving better reflectivity during night, 8% glass beads are added to the paint during laying operations. The product is stated to conform to the test results (e.g. for softening point, binder content and cone test) stipulated in the British standard and has been devised for Indian climatic and environmental conditions with a laying temperature of 160°C.

The numerous advantages claimed for the thermoplastic paint over the conventional paints are stated as below :

- (i) Longer life (3 years and 1 year for 3 mm and 7 mm thick applications respectively) as compared to the conventional paints currently in use

- (ii) Excellent visibility both during day and night imparted by the constituent transparent beads
- (iii) Quicker drying time
- (iv) Improved skid resistance
- (v) Good abrasion resistance
- (vi) Unaffected by extreme weather/climatic conditions
- (vii) Suitable for bituminous, concrete and metallic surfaces
- (viii) Non-cracking and stability on laying
- (ix) Good bondage to the surface and non-softening at high temperatures
- (x) Low flow resistance and low viscosity for easy application
- (xi) No change in colour due to atmospheric changes.

The material, though costly in the first instance is claimed to be cost effective in the long run due to its longer service life apart from the advantages listed above. As reported, pavement markings using this material laid on trial basis as far back as in 1981 in Bombay city, have stood the rigours of large vehicular traffic and the climatic fluctuations. Pavement markings using this material have also reportedly been provided along National Highways in Nasik and Pune in May/June, 1984 and similar applications are due to be laid in Kolhapur (on Poona-Bombay road) in May, 1985.

The firm are prepared to take up the work of pavement markings on a turnkey basis (inclusive of cost of materials, application, overheads etc.) and have already designed a laying machine which is being used on the jobs executed and those in hand. For augmenting the speed and accuracy of laying operations, the firm are reportedly contemplating acquisition of a sophisticated mechanised applicator from abroad.

In view of the claimed superiority of the thermoplastic pavement marking paint and its potential for wide applicability on Indian Roads for improving road safety and for reducing the incidence of traffic accidents, the suitability, durability and cost-effectiveness of the material is required to be examined in the context of Indian Road, traffic and climatic/environmental conditions before advocating the same for general usage. With this objective in view, you may like to consider giving this material a trial on an experimental basis, monitor its performance and communicate necessary feedback to the Ministry on its suitability and performance characteristics.

For any further information and details regarding this material i.e. its specifications, mode of application, availability, cost etc, you may please contact "Recondo Limited, Cooperative Insurance Building, Sir Phirozshah Mehta Road, Fort, Bombay-400001 (attention Dr. K.S. Moorthy)"

602.12.

No.RW/NHVI-80 (1)/74

Dated the 14th May, 1985

To

The Chief Engineers of All States and Union Territories dealing with National Highways

Sub : Revision of traffic signs

Modified instructions with regard to installation of new road signs were communicated to you vide Ministry's letter of even number dated the 29th October, 1984 with the extended target date of 1st June, 1987 for complete switch-over to the new sign system. It was also indicated in the said letter that the cost of these signs will be charged to National Highway original works for which separate provision can be made in the Seventh Five Year Plan and accordingly suitable proposals and work estimates for installation of new signs were called for.

A review of the progress achieved in this direction has, however, revealed that not much headway has so far been made. Now that a little over two years are left for the new sign system to be fully operational which includes framing and furnishing of the cost estimates by the state PWD, sanction by the Ministry and installation of the new traffic signs, prompt and coordinated action by all concerned to complete all these activities within the scheduled time is deemed necessary. With this objective in view, you are requested to furnish a detailed status report indicating present position of framing and submission of proposals/cost estimates for erection of new signs along National Highways in your State together with activity wise phased programme for completion of the work.

In view of the urgency of the matter, it will be appreciated if the status report as indicated above is furnished by the 15th June, 1985.

603 KILOMETRE STONES

Code No.	Circular No. & Date	Brief Subject	Page No.
603.1.	SP-77 (23)/58 dt. 6.12.58	Installation of Kilometre Stones on N.Hs	603/1
603.2.	SP-77 (28)/58 dt. 13.7.59	-do-	603/4
603.3.	SP-77 (23)/58 dt. 10.2.61	-do-	603/5
603.4.	SP-77 (27)/60 dt. 23.9.61	-do-	603/5
603.5.	SP-77 (27)/60-PL dt. 30.5.68	Type Design for 200 Metre Stones	603/6
603.6.	PL-77 (1)/71-SP dt. 27.11.73	Installation of Kilometre Stones on newly declared NHs	603/6
<u>603.7.</u> <u>602</u>	NH-III/P/24/76 dt. 16.6.81	Script of Information & Numerals	See Code No. 602
<u>603.8.</u> <u>4130</u>	NHIII/P/10/83 dt. 27.3.85	Recording the Information of Renewals on Kilometre Stones	See Code No. 4130
603.9.	PL-77 (1)/84-85 dt. 11.4.85	Installation of Kilometre Stones	603/8

LETTER NO. SP-77 (23)/58 DATED THE 6TH DECEMBER 1958 FROM THE CONSULTING ENGINEER (ROAD DEVELOPMENT) TO THE CHIEF ENGINEERS OF STATE (CONCERNED WITH ROADS) (2) THE PRINCIPAL ENGINEERING OFFICER, MANIPUR, (3) THE CHIEF ENGINEER, CENTRAL PUBLIC WORKS DEPARTMENT, NEW DELHI

Sub : Installation of kilometre Stones on National Highways

I have the honour to say that at present the numbering of miles stones on National Highways does not follow a uniform and co-ordinated system. As National Highways consist of sections of old local roads, miles-stones have, in many cases, continued to bear the names of places of local importance only as starting and terminal stations.

2. With the introduction of the metric system new kilometre stones will be put up on all roads in the country. The prevalent practice of marking distances along sections of National Highways from parochial towns should not be perpetuated by its adoption on the kilometre stones also. It has, therefore, been considered necessary to fix starting and terminal stations for the marking of kilometre stones on National Highways as shown in the accompanying statement.

3. Except for National Highways Number 2 to Number 9, which are very long and will be divided into convenient sections for the purpose of marking distances on kilometre stones, measurement on all other National Highways will proceed from the starting station at one end to the terminal station at the other end. In a few cases the origin, or termination, of a National Highway is at an unimportant or a nameless place. In cases of this type the next important station on another adjacent National Highway has been selected as the origin or the destination. For example, Vishakhapatnam has been selected for National Highway 43 and Rewa for National Highway, 27.

4. The procedure to be followed is :

(1) The State in which the starting station of a National Highway is situated should make a start on measuring the National Highway. Temporary marks should be put up at every kilometre and a permanent mark at the last kilometre on that National Highway in the State. The next State will then start the measurement from that permanent mark and similarly continue the measurement in its own territory, and, in turn, set up a permanent kilometre mark at the last kilometre in its territory. This procedure will be continued upto the terminal station.

(2) Where a National Highway by pass has been built or is under construction round a city, measurement will follow the bypass route.

(3) In case of doubt or ambiguity, the exact location of the starting point of a National Highway at the starting station should be decided in consultation with this Ministry.

(4) Temporary kilometre marks will be replaced by kilometre stones within five years (i.e. by the 31st March 1963).

(5) A type design for highway kilometre stones is under preparation with the Indian Roads Congress and will be circulated shortly. The type design will give details about the shapes and sizes of kilometre stones, the shapes and spacing of letters and figures the scripts to be used, the colour schemes, and the method of location on the roadside.

6. I have to request that the measurement of National Highways (or sections of National Highways in the case of National Highway 2 to 9) whose starting stations lie in your State may kindly be undertaken, as set out in para 3 above, and completed as early as possible, so that adjoining states may be able to carry the measurement through to the other end. This Ministry may kindly be kept informed of the progress made.

7. All expenditure in connection with the installation of kilometre stones may be charged to M and R allotments for National Highways.

STATEMENT SHOWING THE STARTING & TERMINAL SECTION ON NATIONAL HIGHWAYS

Sl. No.	N.H. No.	Description of National Highways	Starting Station	Terminal Station	Remarks
1.	I	The highway connecting Delhi, Ambala, Jullundur and Amritsar and proceeding to the border between India and Pakistan.	Delhi	Amritsar	On the section beyond Amritsar, distance will be shown to Vagah.
2.	I A	The highway connecting Jullundur, Madhopur, Jammu, Ranihai, Srinagar, Baramala and Uri.	Jullundur	Uri	

3.	2	The highway connecting Delhi, Mathura, Agra, Kanpur, Allahabad, Banaras, Mohauli, Narhi and Calcutta. Section I Section II Section III	Delhi Kanpur Banaras	Kanpur Banaras Calcutta	
4.	3	The highway connecting Agra, Gwalior, Shivpuri, Indore, Dhulla, Nasik, Thana and Bombay. Section I Section II	Agra Indore	Indore Bombay	
5.	4	This highway starting from its junction near Thana with the highway specified in S. No. 4 and connecting Poona, Belgaum, Hubli, Bangalore, Ranipat and Madras. Section I Section II Section III	Madras Bangalore Poona	Bangalore Poona Bombay	Actually the road terminals near Thana at its junction with NH 8. The system of km stones on this road will and with the last km stone before Thana.
6.	5	The highway starting from its junction near Baharagora with the highway specified in S. No. 7 and connecting Cuttack, Bhubaneswar, Vishakhapatnam, Vijayawada and Madras. Section I Section II Section III Section IV	Madras Bhubaneswar Vishakhapatnam Bhubaneswar	Bezwada Vishakhapatnam Bhubaneswar Calcutta	The system of kilometre stones on this road will end with the last kilometre stone before the junction with National Highway.
7.	6	The highway starting from its junction near Delhi with the highway specified in S. No. 4 and connecting Nagpur, Raipur, Sambalpur, Bahra- gora and Calcutta. Section I Section II Section III	Calcutta Sambalpur Nagpur	Sambalpur Nagpur Dhulia	
8.	7	The highway starting from its junction near Banaras with the highway specified in S. No. 3 and connecting Magawan, Sewa, Jabalpur, Lakhnadon, Nagpur, Hyderabad, Kurnool, Bangalore, Krishnagiri, Salem, Dindigul, Madurai and Cape Comorin. Section I Section II Section III Section IV Section V	Banaras Nagpur Hyderabad Bangalore Madurai	Nagpur Hyderabad Bangalore Madurai Kanya Kumari	Measurement will start from the kilometre stone on National Highway 2 previous to the junction with N.H. In the northward direction, however, the kilometre stones.
9.	8	The highway connecting Delhi, Jaipur, Ajmer, Udaipur, Ahmedabad, Baroda and Bombay. Section I Section II Section III	Delhi Ajmer Ahmedabad Ahmedabad	Ajmer Ahmedabad Bombay Kandla	
10.	8 A	The highway connecting Ahmedabad, Limbi Morve and Kandla.			
11.	8 B	The highway starting from its junctions near Ramabore with the highway specified in S. No. 10 and connecting Rajkot and Porbandar.	Porbandar	Bambenbel	The system of kilometre stones on this road will and with the last kilometre stones before the junction with National Highway 8 A.
12.	9	The highway connecting Poona, Sholapur, Hyderabad and Vijayawada. Section I Section II	Poona Hyderabad Delhi	Hyderabad Vijayawada Fazilka	
13.	10	The highway connecting Delhi and Fazilka and proceeding to the border between India and Pakistan.			Kilometre stone on the section beyond Fazilka should show the name of the border post as the destination.
14.	22	The highway connecting Ambala, Kalka, Simla, Paupur and Chinim and proceeding to the borders between India and Tibet near Shipki-la.	Ambala	Shipki-la	Kilometre stones on the post beyond Shipki-la should show the name of the border post as the destination.

15.	24	The highway connecting Delhi, Bareilly and Lucknow.	Delhi	Lucknow	
16.	25	The highway connecting Lucknow, Nagpur, Jhansi and Shivpuri. Section I Section II	Lucknow Shivpuri	Kanpur Bhagnipur	
17.	26	The highway connecting Jhansi and Lakhnandon.	Jhansi	Lakhnandon	
18.	27	The highway connecting Allahabad with the highway specified in Sl. No. 8 near Mangawan.	Allahabad	Rewa	The system of kilometre stones on this road will and with the last kilometre stones before the junction with National Highway.
19.	28	The highway starting from its junction near Barauni with highway specified in Sl. No. 23 and connecting Muzaffarpur, Pipra, Gorakhpur and Lucknow.	Lucknow	Mokamah bridge	Measurement will end at the junction with National Highway 31 A.
20.	28 A	The highway starting from its junction near Pipra with the highway specified in Sl. No. 19 and connecting Sagauli and Raxaul and proceeding to the border between India and Nepal.	Pipra	Raxaul	Beyond Raxaul the kilometre stones will show Nepal border as the destination.
21.	29	The highway connecting Gorakhpur, Ghazipur and Banaras.	Banaras	Gorakhpur	
22.	30	The highway starting from its junction near Mehanda with the highway specified in S. No. 3 and connecting Patna and Bakhtiarapur.	Mohania	Bakhtiarapur	Measurement will start at the junction with National Highway.
23.	31	The highway starting from its junction near Barhi with the highway specified in S. No. 3 and connecting Bakhtiarapur, Mokamah, Purnea, Dalkehra, Siliguri, Sivok, and Coach-Bihar, and proceeding to its junction with the highway specified in S. No. 28 near Goalpara.	Burhi	Goalpara	
24.	31 A	The highway connecting Sivok and Gangtok	Sivok	Gangtok	
25.	32	The highway starting from its junction with National Highways No. 2 near Gobindour and connecting Dhanbad with Jamshedpur.	Dhandbad	Jamshedpur	Measurement will start from the junction with National Highway 2. This National Highway actually ends at Chandil and this system of kilometre stones will end there. In the reverse direction kilometre stones north of Dhanbad up to the junction with National Highway 2 may show Asansol as the destination.
26.	33	The highway starting from its junction near Barhi with the highway specified in S. No. 3 connecting Ranchi and Tatanagar and proceeding to the junction with the highway specified in S. No. 7 near Bahargora.	Barhi	Not yet decided	The alignment between Ranchi and National Highway 6 is still under consideration.
27.	34	The highway starting from its junction near Dalkhola with the highway specified in S. No. 23 and connecting Barhampore, Barasat and Calcutta.	Calcutta	Dalkhola	
28.	35	The highway connecting Barasat and Bangaon and proceeding to the border between India and Pakistan.	Barasat	Bangaon	Kilometre stones on the section beyond Bangaon will show Pakistan border as the destination.
29.	37	The highway starting from its junction near Goalpara with the highway specified in S. No. 23 and connecting Gauhati, Jorahat, Kamargaon, Makum and Saikhoa Ghat.	Goalpara	Saikhoaghat	
30.	38	The highway connecting Makum, Lado and Lakhapani.	Makum	Lakhapani	
31.	39	The highway connecting Kamargaon, Imphal and Palel and proceeding to the border between India and Burma.	Mumalgarh	Palal	Kilometre stone on the section beyond Palal will show Burma on border as the destination.
32.	40	The highway connecting Jorahat and Shillong and proceeding to the border between India and Pakistan near Dawki.	Jorahat	Dawki	Kilometre stones on the sections beyond Dawki will show Pakistan border as the destination.

33.	42	The highway starting from its junction near Sambalpur with the highway specified in S. No. 7 and proceeding via Angul to its junction with the highway specified in S. No. 6 near Cuttack.	Cuttack	Sambalpur	Measurement will start from the junction with National Highway 5. In the reverse direction, however, kilometre stones should show Cuttack as the destination. The system of kilometre stones on this road will end before the junction with National Highway 6.
34.	43	The highways connecting Raipur and Vizianagaram and proceeding to its junction with the highway specified in S. No. 6 near Vizianagaram.	Raipur	Vishakhapatnam	This system of kilometre stones will end before the junction with National Highway 5.
35.	45	The highway connecting Madras, Tiruchirappalli and Dindigul.	Madras	Dindigul	
36.	46	The highway connecting Krishnagiri and Ranipat.	Krishnagiri	Ranipat	
37.	47	The highway connecting Salem Coimbatore, Trichur, Ernakulam, and Trivandrum and Cape Comorin.	Salem	Cape Comorin	
38.	47 A	The highway starting from its junction near Trichur with the highways specified in S. No. 36 and connecting with the West Coast Road near Chalisseri.	Trichur	Chalisseri	
39.	49	The highway connecting Madurai and Dhanushkodi.	Madurai	Mandapam	As there is at present no road bridges between the main land and Rameshwaram island north road on the island leading upto Dhanushkodi, it is desirable to show Mandapam as the terminal station on this National Highway, Mandapam being the last point on the National Highway on the main land.
40.	50	The highway connecting Nasik with the highway specified in S. No. 5 near Poona.	Nasik	Poona	Kilometre stones along with this road will not be put beyond the junction with National Highway 4.

603.2.

No. SP-77 (23)/58-II

Dated the 13th July, 1959

To

The Chief Engineers of States (concerned with Roads)

Sub : Installation of Kilometre Stones on National Highways

In continuation of this office circular letter No. SP-77 (23)/58 dated the 6th December, 1958, on the subject mentioned above, I am to say that it is considered desirable that for each town or city there should be one point, which may be termed the "origin" from or to which road distances are measured for marking on Kilometre stones on all the roads passing through or radiating from that city. Such a point may be the civic centre of the city, or some other important public building or monument.

2. When a National Highway bypass is built near a town or city the National Highways system of kilometre stones should be installed on the bypass. At the points of bifurcation of the bypass direction posts should be put up showing the roads to the city along the old route and to the next important town along the bypass. On the direction posts the distance to the city (measured to the "origin") along the old route should be shown. Kilometre stones on the old route between the bifurcation and the "origin" will not belong to the National Highway system, but along the bypass, they should conform to the National Highway standards. The latter i.e. kilometre stones on the bypass will show distances to the next important place in each direction.

3. Kilometre stones on a National Highway originating in a city will also start from the "origin", but such stones beyond the municipal limits only will belong to the National Highway system.

4. It is also suggested that for the sake of uniformity in any particular city the same "origin" may be adopted in respect of all roads (i.e. National Highways as well as other roads) passing through or originating in that city.

603.3.

LETTER NO. SP-77(23)/58 DATED THE 10TH FEBRUARY 1961 FROM THE CONSULTING ENGINEER (ROAD DEVELOPMENT), MINISTRY OF TRANSPORT & COMMUNICATIONS, DEPARTMENT OF TRANSPORT (ROADS WING) TO THE (1) THE CHIEF ENGINEERS OF STATES, (DEPARTMENT CONCERNED WITH ROADS). (2) THE CHIEF ENGINEER, CENTRAL PUBLIC WORKS DEPARTMENT, NEW DELHI.

Sub : Installation of kilometre stones on National Highways

I am to invite a reference to this Department's letter No. SP-77 (23)/58, dated the 6th December, 1958, intimating the procedure to be followed with regard to the installation of kilometre stones on National Highways and indicating that type design for highway kilometre stones was under preparation of the Indian Roads Congress which would be forwarded to you. The Indian Roads Congress has since finalised the type designs for highway kilometre stones. These type designs are for use on all roads, wherever it is intended to set up kilometre stones.

2. A copy of the type designs was enclosed with the Memorandum on item 14 of the agenda for the Chief Engineers meeting held at Bhopal on the 7th January, 1961 which was forwarded to you with this Department's letter No PL-2 (7)/60, dated the 26th December, 1960, more copies thereof are forwarded herewith. Their receipt may kindly be acknowledged.

3. In case more copies of the type designs are required they may kindly be obtained on payment direct from the Secretary, Indian Roads Congress, Jamnagar House, Mansingh Road, New Delhi. the price per copy is Rs 00.75 plus packing and postage.

603.4.

LETTER NO. SP-77(27)/60 DATED THE 23RD SEPTEMBER, 1961 FROM THE MINISTRY SHIPPING & TRANSPORT ADDRESSED TO ALL STATE GOVTS. AND ADMINISTRATIONS OF UNION TERRITORIES OF HIMACHAL PRADESH, MANIPUR, DELHI AND NAGALAND. (DEPARTMENTS DEALING WITH ROADS).

Sub : Installation of kilometre stones on National Highways

I am directed to say that as the State Govt/Administration are aware, the Government of India have decided that new National Highway will be marked in kilometres and on the existing National Highways mile-stones will be replaced by kilometre stones. The procedure to be followed with regard to the installation of kilometre stones on the National Highways was laid down in the Consulting Engineer (Road Development)'s letter No. SP-77 (23)/58, dated the 6th December, 1958 addressed to all State Chief Engineers etc. A copy of that letter was also endorsed to the State Governments.

2. It has also been decided that the figures on the kilometre stones should be marked in the international numerals. The Indian Roads Congress have prepared type designs for highway kilometre stones. These type designs provide, *inter alia*, that the numerals will be inscribed in the international form of Indian numerals and that the place names will be inscribed in different scripts in the following order, only one script being used on any one kilometre stones :

Kilometre No.	Script for place names
0	Roman
1	Hindi (Devnagari Script)
2	Local language
3	Hindi (Devnagari Script)
4	Local language
5	Roman.

And so on repeated in the same order. These type designs have been accepted by the Govt. of India for kilometre stones on National Highways. Copies of the type design were supplied to the State Governments and State Chief Engineers etc. by the Consulting Engineer (Road Development) *vide* his letter No. SP-77 (23)/58, dated the 10th February 1961.

3. As indicated in the Consulting Engineer (Road Development)'s letter No. SP-77 (23)/58, dated the 6th December 1958, all expenditure in connection with the installation of kilometre stones on National Highways is to be charged to the grants for Maintenance and Repairs of National Highways. The Government of India attach great importance to the marking of distances on National Highways in kilometres. I am accordingly to request that steps may kindly be taken to ensure that the work relating to the installation of kilometre stones on National Highways in your State/Union Territory is taken up immediately, if not already done, and completed within three years.

No. SP-77 (27)/60-PL

Dated the 30th May, 1968

To

The Chief Engineers of State & Union Territories (Departments dealing with Roads)

Sub : Type Design for 200-Metre Stones

I am to say that as the State Chief Engineers are aware a number of circular letters have issued from time to time from this organisation regarding the installation of kilometre Stones on National Highways. The procedure to be followed for fixation of stones on National Highways was explained in the Ministry's letter No. SP-77 (23)/58 dated the 6th December, 1958, and with another letter of same number dated the 10th February, 1961, copies of the 'Type Design of Highway Kilometre Stones', finalised by the Indian Roads Congress, had been forwarded, for use on all roads wherever it was intended to set up the Kilometre stones.

2. The Type Design circulated earlier did not have provision for any intermediate distance markers between the successive kilometre stones. Since absence of intermediate reference points was causing difficulty to the field staff in maintenance and construction operations, the matter was reconsidered by the Indian Roads Congress and they have brought out recently a standard in respect of stones to be fixed every 200 metres between the kilometre stones. The title of this standard is "Type Design for 200-Metre Stones", and copies of it can be had direct on payment from the Secretary, Indian Roads Congress, Jamnagar House, Shahjahan Road, New Delhi-11, at Rs 2 per copy, packing and postage extra.

3. It is requested that the procedure laid down in this standard may be followed for all work pertaining to the planting of intermediate distance markers between kilometre stones on the National Highways in your State. And if there is no objection, instructions to this affect may also kindly be issued to all the Staff under you.

603.6.

No. PL-77 (1)/71-SP

Dated the 27th November, 1973

To

All the Chief Engineers of State PWDs, CPWD

Sub : Installation of Kilometre stones on newly declared N. Hs.

When metric system was introduced in the country, it was decided by the Govt. that all N. Hs will be marked with Km. stones. The detailed procedure to be followed in regard to the installation of Km and 200 M stones stands explained in the following letters of the Ministry issued from time to time :

- (i) No. SP-77 (23)/58, dt. 6.12.58
- (ii) No. SP-77 (23)/58, dt. 10.2.61
- (iii) No. SP-77 (27)/60, dt. 23.9.61
- (iv) No. SP-77 (27)/60-PL dt. 30.5.68

Copies of these letters are enclosed for ready reference.

2. During 1971 and 72 some more routes were added to the N.H. system vide notifications dt. 21.7.71 and 7.3.72. In respect of these highways it has been decided to fix the starting and terminal stations as shown in the accompanying statement, so that the work of installation of Km stones on them could be taken up and completed.

3. It is requested that the measurement of newly declared N. Hs and installation of Km stones on these as per instructions contained in the letters referred to in para 1 may kindly be undertaken immediately. In the case of sections of N. Hs which fall in more than one State, the State in which the starting station is situated is required to intimate the kilometerage at the border to the adjoining State as early as possible, so that the work could be completed right upto the other end. These sections should therefore, be given priority.

4. All exp. incurred in connection with the installation of Km and 200 M stone may be charged to the M&R grants for the N. Hs.

5. This Ministry may kindly be kept informed of the progress made. Ministry's field officers have also been asked to liaison with the C. Es in this regard.

Encl : Not printed

STATEMENT SHOWING THE STARTING AND TERMINAL STATIONS FOR NEWLY DECLARED N.H.S

S. No. 1	N.H. 2	Description of N.H. 3	Starting Station 4	Terminal Station 5	States 6	Remarks 7
1.	4-A	Highway connecting Belgaum, Anmod, Ponda and Panaji.	Belgaum	Panaji	Goa and Mysore.	
2.	5-A	Highway starting from its jns. near Haridaspur with NH 5 and terminating at Paradip Port.	Cuttack	Paradip Port	Orissa	For numbering the Km. stones on this road, zero should be reckoned as the Jn. point of NH 5A with NH 5 i.e. near Haridaspur.
3.	7-A	Highway connecting Palayankotai on N.H. 7 with Tuticorin port.	Palayankotai	Tuticorin	Tamil Nadu	
4.	15	Highway connecting Pathankot, Amritsar, Bhatinda, Ganganagar, Bikaner, Jaisalmer, Barmer to its Jn. with NH 8A near Samakhiali (near Kanda)			Punjab, Rajasthan and Gujarat.	The system of Km stones on the Sec. I of the road will end with the last Km stone before Jn. with NH 10 near Malaout. Similarly on the Section V, the system will end with the last Km stone before Jn. with NH 8A.
		Section I	Pathankot	Abohar		
		Section II	Abohar	Bikaner		
		Section III	Bikaner	Jaisalmer		
		Section IV	Jaisalmer	Sanchor		
		Section V	Sanchor	Kandla		
5.	17	Highway connecting Panvel on NH 4 Mahad, Panaji, Karwar, Mangalore, Cannanore, Calicut (Kozhikode) & Trichur.			Maharashtra, Goa, Karnataka & Kerala.	Division into these sections is covered by the decision already communicated vide Min's letter No. VIII-115 (6)/63 when the road was not a N.H. but known as West Coast Road.
		Section I	Panvel	Panaji		
		Section II	Panjim	Mangalore		
		Section III	Mangalore	Trichur		
6.	17-A	Highway starting from its Jn. near Cortalim with N.H. 17 and terminating at Morugao Port.	Cortalim	Morugao Port.	Goa	
7.	21	Highway starting from its Jn. near Chandigarh with N.H. 22 and connecting Ruprar, Bilaspur, Mandi, Kulu and Manali.	Chandigarh	Manali	Haryana, Punjab and Himachal Pradesh.	For the short stretch of the road from its Jn. with N.H. 22 upto Chandigarh, starting and terminal stations will be considered as Ambala & Chandigarh, respectively.
8.	28	Highway connecting Chas, Ranchi, Rourkela, Talcher and terminating at N.H. 42.			Bihar and Orissa.	The system of Km stones on the I Sec. will end with the last Km stone before the Jn. of the road with NH 33 near Ormanjhi. Similarly, the system of stone on the III Sec. will end with the last Km. stone before the Jn. with NH 42.
		Section I	Chas	Ranchi		
		Section II	Ranchi	Rourkela		
		Section III	Rourkela	Cuttack		
9.	36	Highway connecting Nowgong, Dalkola and Dimapur (Manipur Road).	Nowgong	Dimapur	Assam and Nagaland.	
10.	44	Highway connecting Shillong, Passi, Badapur and Agartala.	Shillong	Agartala	Meghalaya, Assam and Tripura.	
11.	48	Highway connecting Bangalore, Hassan and Mangalore.	Bangalore	Mangalore	Karnataka	For numbering the Km. stones on this road, zero should be reckoned as the Jn. point of NH 48 with NH 4 i. e. near Neelamangla.

No. PL-77 (1)/84-85

Dated the 11th April, 1985

To

1. The Chief Engineers dealing with the National Highways works in the States of Assam, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal
2. Principal Engineers, P.W.D., Pondicherry, Arunachal Pradesh and Mizoram
3. Director General Border Roads, Kashmir House, New Delhi

Sub : Installation of kilometre stone on newly declared National Highways

When metric system was introduced in the country, it was decided by the Government that all National Highways will be marked with kilometre stones. The detailed procedure to be followed in regard to the installation of kilometre and 200 metre stones stands explained in the following letters of the Ministry issued from time to time.

- (i) No. SP-77 (23)/58 dated the 6th December, 1958
- (ii) No. SP-77 (27)/60 dated the 23rd September, 1961
- (iii) No. SP-77 (27)/60-PL dated the 30th May, 1968.

Copy of these letters are enclosed for ready reference.

2. During 1980 and 1984 some more routes were added to the Highway system. In respect of these highways it has been decided to fix the starting and terminal stations as shown in the accompanying statement, so that the work of installation of kilometre stones on them could be taken up and completed.
 3. It is requested that the measurement of newly declared National Highways and installation of kilometre stones on these as per instructions contained in the letters referred to in para 1 may kindly be undertaken immediately. In the case of sections of National Highways which fall in more than one state, the state in which the starting station is situated is required to intimate the kilometrage at the border to the adjoining State as early as possible, so that the work could be completed right upto the other end. These sections should, therefore, be given priority.
 4. Guidelines in fixation of Zero point may be followed as under :
 - i) It is considered desirable that for each town or city there should be one point, which may be termed the "Origin" from or to which road distances are measured for marking on kilometre stones on all the roads passing through or radiating from that city. Such a point may be the civic centre of the city, or some other important public building or monument.
 - ii) When a National Highway bypass is built near a town or city the National Highways system of kilometre stones should be installed on the bypass. At the points of bifurcation of the bypass, direction posts should be put up showing the roads to the city along the old route and to the next important town along the bypass. On the direction posts the distance to the city (measured to the "Origin") along the old route should be shown. Kilometre stones on the old route between the bifurcation and the "Origin" will not belong to the National Highway system, but along the bypass, they should conform to the National Highway standards. The latter i.e. kilometre stones on the bypass will show distances to the next important place in each direction.
 - iii) Kilometre stones on a National Highway originating in a city will also start from the "Origin", but such stones beyond the municipal limits only will belong to the National Highway system.
 - iv) It is also suggested that for the sake of uniformity in any particular city the same "Origin" may be adopted in respect of all roads (i.e. National Highways as well as other roads) passing through or originating in that city.
 - v) All expenditure incurred in connection with the installation of the kilometre and 200 metre stone may be charged to National Highways Funds.
 - vi) This Ministry may kindly be kept informed of the progress made. Ministry's field officers have also been asked to liaise with the Chief Engineers in this regard.
- Encl : Not printed.

STATEMENT SHOWING THE STARTING AND TERMINAL STATION FOR NEWLY DECLARED NATIONAL HIGHWAYS

S. No.	N.H.	Description of National Highway	Starting Station	Terminal Station	States	Remarks
1	2	3	4	5	6	7
1.	1B	Batote-Kishtwar	Batote	Kishtwar	J&K	The Zero of the route shall be at its junction with NH 1A near Batote.
2.	4B	Nhava-Shiva-Panvel	Nhava-Shiva	Kalamboli Palaspe	Maharashtra	The Zero point should be reckoned from Km. 6/0 on Uran-Panvel State Highway (S.H. 4) near Kaad in Nhava-Shiva Port Complex.
3.	8C	Chileda-Gandhinagar-Sarkhej	Chiloda	Sarkhej	Gujarat	For numbering the kilometre stone on this road Zero should be reckoned at Chiloda.
4.	12	Jabalpur-Bhopal-Biora. Rajgarh-Kota-Bundi-Tonk Jaipur	Jabalpur	Jaipur	M.P. Rajasthan	For numbering the kilometre stone on this road zero should be reckoned at Jabalpur at the junction points with the approaches to Tilwaraghat bridge on Jabalpur side.
5.	13	Sholapur-Chitradurg	Sholapur	Chitradurg	Maharashtra Karnataka	For numbering the kilometre stone on this road, zero should be reckoned at Sholapur.
6.	31B	North Salmara Junction with NH 37 near Gaolpara	North Salmara	Jn. with near NH 37 near Gaolpara	Assam	For numbering the kilometre stones on the road, zero should be reckoned as the junction point of NH 31 near North Salmara.
7.	31C	Near Galgalia-Baghdogra-Ohalsa Nagrakata-Goyarkata-Dalgaon-Hasimara-Rajabhatkh-awe-Kochugaon Sidhi-Jn. with NH 31 near Bijni.	Near Galgalia	Jn. with NH 31 near Bijni	West Bengal Assam	For numbering the kilometre stones on this road, zero should be reckoned as the junction points near Galgalia.
8.	41	Junction with N.H. 6 near Kolaghat Haldia Port.	Jn. with NH 6 near Kolaghat	Haldia Port	West Bengal	For numbering the kilometre stones on this road, zero should be reckoned as the junction point with NH 6 near Kolaghat.
9.	45A	Villupuram-Pondicherry	Villupuram	Pondicherry	Tamil Nadu Pondicherry	For numbering the kilometre stones on this road, zero should be reckoned at junction point near Villupuram.
10.	51	Paikan-Tura-Dalu	Paikan	Dalu	Assam Meghalaya	For numbering the kilometre stones on this road, zero should be reckoned in the junction point with NH 37 near Paikan.
11.	52	Baihota-Charali-Tezpur-Bander Dewa-North Lakhimpur-Pasighat Tezu-Silapani-Junction with NH 37 near Saikhoaghat.	Baihata Charali	Jn. with NH 37 near Saikhoaghat	Assam Arunachal Pradesh	For numbering the kilometre stones on this road, zero should be reckoned at Baihota Charali.
12.	52A	Bander Dewa-Itanagar	Bander Dewa	Itanagar	Assam Arunachal Pradesh	For numbering the kilometre stones on this road, Zero should be reckoned as the junction point with NH 52 near Bander-Dewa.
13.	53	Jn. with NH 44 near Badarpur-Jirighat Imphal-Silchar.	Jn. with NH 44 near Badarpur	Imphal	Assam Manipur	For numbering the kilometre stone on this road, zero should be reckoned as the junction point with NH 44.
14.	54	Silchar-Aizawal-Lunglei	Silchar	Lunglei	Assam Mizoram	For numbering the kilometre stone on this road, zero should be reckoned as the junction point with NH 53 near Silchar.
15.	56	Lucknow-Sultanpur-Jagdishpur-Varanasi	Lucknow	Varanasi	Uttar Pradesh	For numbering the kilometre stones on this road, zero should be reckoned at near Lucknow.

604 HIGHWAY SAFETY-RAILS, BARRIERS, SPEED BREAKERS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
<u>604.1.</u> 500	NHIII/MISC/51/73 dt. 19.10.73	Proper location of Culverts & Bridges	See Code No. 500
604.2.	PL-67 (14)/75 dt. 4.3.76	Connection of Approaches to Highway Bridges	604/1
604.3.	PL-50 (8)/72 dt. 4.6.76	Construction of Speed Breakers on National Highways	604/2
<u>604.4.</u> 150	TGS (21)/75, dt. 6.1.78	Accidents at Unmanned Level Crossings	See Code No. 150
604.5.	PL-50 (8)/72-NHVI dt. 25.4.78	Construction of Speed Breakers on National Highways	604/2
604.6.	NHIII/P/29/78 dt. 28.2.80	Erection of Highway Barriers on National Highways	604/3
604.7.	RW/NHIII/P/29/78 dt. 18.11.80	Highway Barriers on National Highways	604/3
<u>604.8.</u> 150	RW/NHIII/P/31/80 dt. 20.11.80	Safety Measures at Railway Level crossings	See Code No. 150

No. PL-67 (14)/75

Dated the 4th March, 1976

To

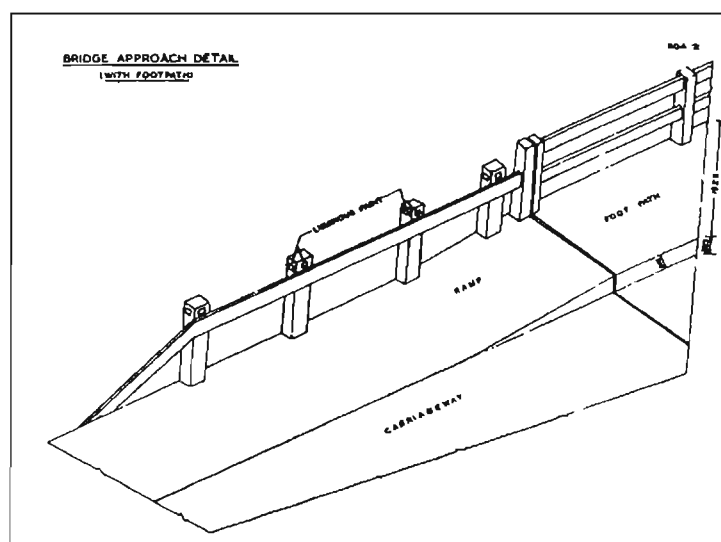
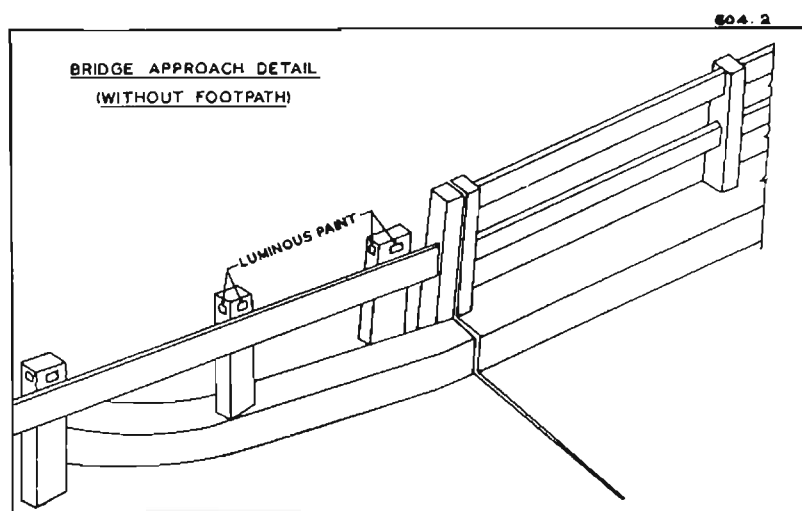
The Chief Engineers of State PWDs (dealing with roads)

Sub : Connection of approaches to Highway Bridges

The physical characteristics and the dimensions of the bridge are different from its immediate approaches. The bridges on National Highways are provided with 7.5 metres carriageway width with raised kerbs and the railings at the edges. These characteristics are absent in any adjoining connecting approaches. As a result, the railings and kerbs are normally stopped abruptly at the end of the bridge without any indication of such a change in the characteristics of the roadway system. Another aspect is that the total width of the structure for bridges without footpaths is about 8.4 metres whereas the total width of the embankment at top is normally 12 metres in approaches.

2. The absence of any standard layout for sudden narrowing of the overall roadwidth and indication of the change in the physical characteristics like raised kerbs and railings the connection of approaches remains a road hazard and serious accidents take place for **run-off-the-road** vehicles. The extent of the hazard is increased by the presence of channels or other obstacles over which the bridges are built.

3. A layout for the guard rails in the immediate approaches to the bridge aligning with the railings has been worked out to serve as delineators to guide the vehicles on the bridge and to exclude the **run-off-the-road** vehicles from the dangerous area of road site hazard and redirecting them as far as possible. Isometric views of the proposal are also enclosed with a copy of the proposed layout. The structural details, however, will have to



be worked out before these guard rails are adopted. You are requested to examine this proposal and communicate your comments and suggestions within 15 days of the receipt of this letter before we finalise this proposal for adoption. You are also requested to send a report of the performance of any such structures adopted in your State.

604.3.

No. PL-50 (8)/72

Dated the 4th June, 1976

To,

The Secretaries to the State Public Works Departments, dealing with National Highways

Sub : Construction of speed breakers on National Highways

It has come to Ministry's notice that at many places on National Highways, local authorities are constructing road humps, i.e. speed breakers, to check the speed of vehicles. This is undesirable, as the function of National Highways is to facilitate movement of through traffic and not to hinder it. Speed breakers can be a source of serious hazards and accidents to the fast-moving vehicles. Generally the use of speed breakers is restricted to a residential localities or areas with a specialised land use such as university or hospital campuses. Their use on through roads is incorrect and needs to be deprecated.

2. After careful consideration, it has been decided that henceforth speed breakers should not be permitted on the National Highways. At particular locations where control on speed is regarded necessary for specific reasons, this may be ensured through speed limit signs and strict and rigorous enforcement. Alternatively, the provision of rumble strips or flashing signals may be considered to alert the drivers through audible/visual stimuli. A common application of rumble strips is the placement of intermittent, raised bituminous overlays across the roadway. Raised sections can be 15-25 mm high, 200-300 mm wide, and spaced about one metre centre to centre. A series of such strips, roughly 15-20 at one location, can caution the motorists sufficiently through combination of vibrations and rumbling noise. Since coarse-textured overlays are more effective, the raised sections should consist either of premixed carpet or bituminous surface dressing. As a rule, the decision about design and placement of flashing signals/rumble strips should be preceded by a careful examination of the circumstances obtaining in each case.

3. It is requested that these instructions may please be given wide publicity among the concerned officers in your department.

604.5.

No. PL-50 (8)/72-NHVI

Dated the 25th April 1978

To

The Secretaries to the State Public Works Departments, dealing with National Highways

Sub : Construction of Speed Breakers on National Highways

I am directed to draw your attention to this Ministry's letter No. PL-50 (8)/72, dated the 4th June 1976, wherein it was brought out that the use of speed breakers on National Highways which are meant for through movement is incorrect and needs to be deprecated. The only exception where speed breakers may be permitted is in cases of approaches to the unmanned level crossings. There too, attempts should be made for gradually upgrading all such unmanned level crossings into manned level crossings to the proper standards.

2. Where control on speed was desired for certain specific reasons, the following alternatives were advocated :

- (a) Speed limit signs and strict enforcement
- (b) Provision of rumble strips or flashing signals to alert the drivers.

3. It is once again requested that the instructions contained in this Ministry's letter No. PL-50 (8)/72, dated the 4th June 1976 may please be given wide publicity among the concerned officers in your department under intimation to this Ministry.

4. You are also requested to let this Ministry know of the exact locations on National Highways where the alternatives suggested by the Ministry have been adopted together with the specific reasons leading to it.

No. NHIII/P/29/78

Dated the 28th February, 1980

To

The Secretary to the Govt. of (Department dealing with the National Highways) Maharashtra/Uttar Pradesh, Meghalaya, Andhra Pradesh, Rajasthan, Assam, Orissa, Bihar, Haryana, Madhya Pradesh and Kerala

Sub : Erection of Highway Barriers on National Highways

I am directed to say that your Govt. have executed an agreement with the President of India for maintenance and development of urban links of National Highways in the State. The agreement *inter alia* include a condition (Clause 7 (3) that the State Government shall ensure that octroi or any other terminal taxes on through traffic and tolls are not levied by the Local Body concerned on the link roads maintained and/or developed at Central Govts. expenses. In spite of these legal constraints it has been observed that a large number of barriers have been put up on the National Highway urban links by the State Governments or their agencies like Civil Supplies Department, Police Department, Excise Department, Commercial Taxation Department, Forest Department and Local Bodies etc. for collection of taxes or checking of evasion of taxes etc. It will be appreciated that setting up of these barriers on the National Highways urban links cause serious impediments to free movement of traffic. I am accordingly, to request that the State Government may look into this matter and take immediate step to eliminate/rationalise to minimise the barriers on National Highways urban links. In this connection attention is also invited to this Ministry's circular letter of even number dated the 19th October 1979. The action taken may kindly be intimated to this Ministry.

No. RW/NHIII/P/29/78

Dated the 18th Nov. 1980

To

1. All State Govts. U.T. Admn. (Deptts. dealing with National Highways)
2. Director General Border Roads, New Delhi.
3. Director General Works, Central P.W.D., New Delhi.

Sub : Highway Barriers on National Highways

I am directed to say that the large number of barriers put up on the National Highways by the State Govts. or their agencies for collection of taxes, controlling unauthorised movement of goods etc. cause serious impediment to free movement of vehicles and goods. In the interest of free and unimpeded flow of traffic along the National Highways, the Ministry had issued detailed instructions in the matter, particularly circular letters No. NHIII/P/11/76 dated 28th Feb. 1976, No. NHIII/P/29/78 dated the 29th Oct. 1979 and 28th February, 1980. The main points made in those circulars were :

Circular No. NHIII/P/11/76 dated 28.2.76

- (i) The practice of putting physical barriers on National Highways is not favoured by this Ministry, but at present juncture the State Govts. may permit a barrier provided the same is considered absolutely necessary.
- (ii) Where permitted, the barrier should conform either of the three type designs contained in IRC: 41-1972 "Type Designs for Check Barriers" and its location approved by the State Chief Engineer.
- (iii) The barrier including the necessary laybys/widening of carriageway etc. should be constructed by the Highway Authority as deposit work at the cost of the agency requiring it.
- (iv) The check posts controlling the gates of the barriers should function round the clock to avoid inconvenience to through traffic. Where the gates are closed to stop a passing vehicle, these should be reopened immediately after checking which should be done in the least possible time.

Circular No NHIII/P/29/79 dated 18.10.79

- (v) The State Govts. may take immediate steps for the removal/rationalisation of barriers across National Highways except those which may be required for essential purposes such as enforcing law and order.
- (vi) At the inter-State boundary, the concerned State Govts. may arrange to have only one barrier which may be managed by evolving suitable arrangements coordinatedly by the concerned authorities of the Govts. The proposed unified check barrier should, however, not disturb the existing arrangement for barriers erected/to be erected for collection of fees on bridges costing more than Rs 25 lakhs on National Highways completed and opened to traffic on or after 1st April, 1976.

Circular No. NHIII/P/29/78 dated 28.2.1980

- (vii) The agreement with the President of India for maintenance and development of urban links of National Highways entered into by some of the State *inter-alia* includes a condition that the State Govt. shall ensure that Octroi or any other terminal taxes on through traffic and tolls are not levied by the local body concerned on the link roads maintained and/or developed at Central Govt. expenses. Despite this legal requirement, barriers for collection of taxes etc. have been put up on such urban links. The concerned State Govts. may take immediate steps to eliminate/rationalise these barriers on the urban links so that there is least impediment to through traffic.

2. The question about erection of check barriers was also considered by the Transport Development Council at its meeting held on 2nd August, 1980. The Council emphasised that all efforts should be made by the States to unify check barriers along the National Highways having single combined ones at inter-State boundaries and that they should be of proper design with separate lay-byes so as not to hinder movement of the through traffic. It was indicated that the Transport Ministry will be prepared to consider bearing the cost of these improvements in the case of National Highways in the interest of greater overall safety. Accordingly, the State Govts. may look into the existing arrangements of check barriers at the inter-State boundaries, and prepare proposals and cost estimates for combining the barriers into a single one and forward these to the Ministry for consideration.
3. The State Govts. are requested to extend their cooperation and ensure that impediment to the free movement of vehicles and goods on National Highways are removed by taking immediate steps at the State level to eliminate/rationalise the existing barriers. The Ministry may also please be apprised of the action taken in this regard.

605 TRAFFIC REGULATION

Code No. Circular No. & Date

Brief Subject

Page No.

605.1. NHIII-33 (125)/72
4210 dt. 20.3.73

**Regulation of Traffic on NH (i)
in the event of flood (ii) when
Widening/Reconstruction of an
existing Crossdrainage Structure
is in Progress or const. of a new
Structure on an existing Section**

605/1

605.2. NHIII/33 (126)/72
500 dt. 25.7.74

**Arrangement for Traffic during
Widening/Reconstruction of
Crossdrainage Structures**

**See Code
No. 500**

No. NHIII-33 (125)/72

Dated the 20th March, 1973

To

The Chief Engineers of all State PWDs and Union Territories dealing with National Highways

Subject : Regulation of traffic on National Highway (i) in the event of a flood breach or damage due to certain other reason, or (ii) when widening/reconstruction of an existing cross-drainage structure is in progress or construction of a new structure on an existing section

At occasions, it may become unavoidable to suspend traffic on or divert it from a section of a National Highway breached by flood waters or damaged due to certain other reason. Likewise, there may be need for proper regulation of traffic on a highway when widening/reconstruction of an existing cross-drainage structure or construction of a new structure on an existing section is involved. While every effort should be made to restore the road for normal use as expeditiously as possible, by carrying out restoration/improvement work(s) to preconceived construction schedules, it is important that during the construction schedules, the time restrictions on movement of traffic last and suitable precautions are taken to regulate the flow of traffic and warn it of the danger ahead so as to obviate any untoward accident.

2. For suitable arrangements to be made in such exigencies, a note outlining points of good engineering practice for the safety and smooth flow of traffic is enclosed. It is requested that instructions contained in the note may be strictly followed in future, and the same may be circulated among all officers concerned in your Department.

NOTE ON THE ARRANGEMENTS NECESSARY WHEN TRAFFIC ON NATIONAL HIGHWAYS HAS TO BE SUSPENDED OR DIVERTED FOR ANY SECTION DUE TO FLOOD BREACH OR SIMILAR REASON, OR WHEN WIDENING/RECONSTRUCTION OF AN EXISTING CROSS-DRAINAGE STRUCTURE OR CONSTRUCTION OF A NEW STRUCTURE ON AN EXISTING SECTION IS INVOLVED

1. Introduction

In the interest of safety and convenience of traffic, appropriate measures must be taken whenever traffic on any section of a National Highway is to be diverted to another route, or made to swerve from its normal path into another. Basic principles to be kept in mind are (i) that the traffic must be guided properly where it is required to follow an alternative facility and (ii) given a clear warning of any hazards that may be present ahead.

2. Arrangements when traffic is suspended on a section of a National Highway because of flood breach or damage caused due to certain other reason

- (i) If the duration of suspension is such as to necessitate diversion of traffic to another route, guidance about this should be provided at the appropriate road intersection, on either side of the damaged section, where it would be possible for the through traffic to alter its course. This should be done with the help of suitable warning signs put up in a pair, one just close to the intersection and the other 120 metres away. In addition, a prominent 'road closed' sign should be fixed on the far side of the intersection blocking half the width of the carriageway. Word message on the signs may be in more than one language according to needs of the traffic. To regulate traffic at the points of re-routing, police help may also be requisitioned. Together with this, press and other mass media should be availed of to notify the public about road closure, and alternative routing for the through traffic;
- (ii) Strong inviolable barriers should be erected in the immediate vicinity of the damaged section on both sides so that traffic can have no chance of going through imprudently. Besides, regulatory signs announcing that the road ahead was closed should be installed on the approaches, one sign at 10 m from the barrier and the other 120 metres further away. These should be supplemented by a "road closed" sign affixed to the barrier in prominent position. Word messages on the sign may be in more than one language as dictated by needs of the road users;
- (iii) The barricades should be protected by red warning lamps at night which should stay lit from sunset to sunrise. In addition, alternate black and white diagonal strips should be marked on these for effective advance warning. Preferably, reflectorised paint should be used for this purpose;
- (iv) A watchman should be present at the barrier at all times. Whenever the barrier is to be temporarily opened for construction traffic in connection with repairs to the damaged section, a responsible officer must be present at the site for supervising traffic arrangements and explaining the hazard ahead to adamant drivers. The construction traffic may be allowed through a small opening (about 3 m wide) at the extreme edge of the roadway, normally kept blocked with a double row of painted tar drums which should be removed only for permitting the construction vehicles to pass each time and put back in position immediately thereafter;
- (v) Signs, lights, barriers and other traffic control devices should be kept maintained in a satisfactory condition till such time that the traffic is restored and allowed to follow its normal path; and
- (vi) Typical arrangements according to the above plan are illustrated in Fig. 1.

3M WIDTH AT EXTREME EDGE OF FORMATION, BARRICADED BY DOUBLE ROW OF TAR DRUMS PAINTED BLACK AND WHITE, TO BE OPENED FOR USE OF CONSTRUCTION TRAFFIC ONLY IN THE PRESENCE OF A RESPONSIBLE OFFICIAL.

ARRANGEMENTS FOR TRAFFIC ON THIS SIDE TO BE ON THE SAME LINES AS ON THE OTHER SIDE.

BREACH OR UNPASSABLE SECTION

INVIOABLE BARRIER WITH 'ROAD CLOSED' BOARD FIXED THERE TO.

ROADWAY

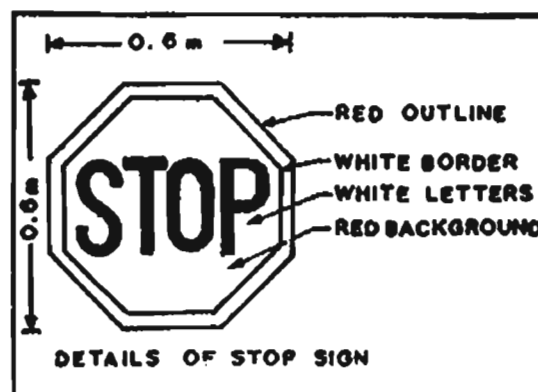
CARRIAGEWAY



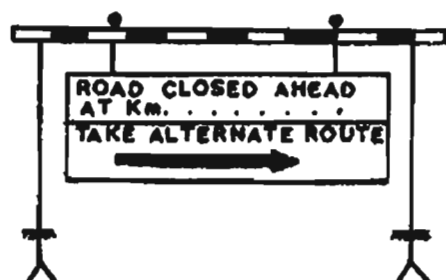
SIGN-1

SIGN-1

SIGN-1



DETAILS OF STOP SIGN

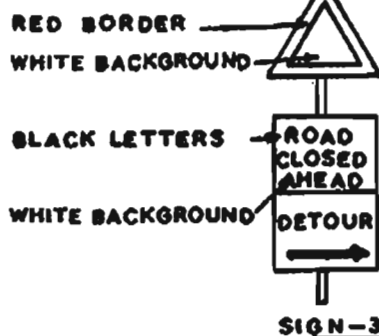


SIGN-2 - PROMINENT SIGN BLOCKING HALF THE CARRIAGEWAY AND FIRMLY FIXED TO THE GROUND

15-CM WIDE LINE TO BE PAINTED WHITE

NEAREST ROAD FOR DETOUR FOR THROUGH TRAFFIC

SIGN-2



SIGN-3

SIGN-3

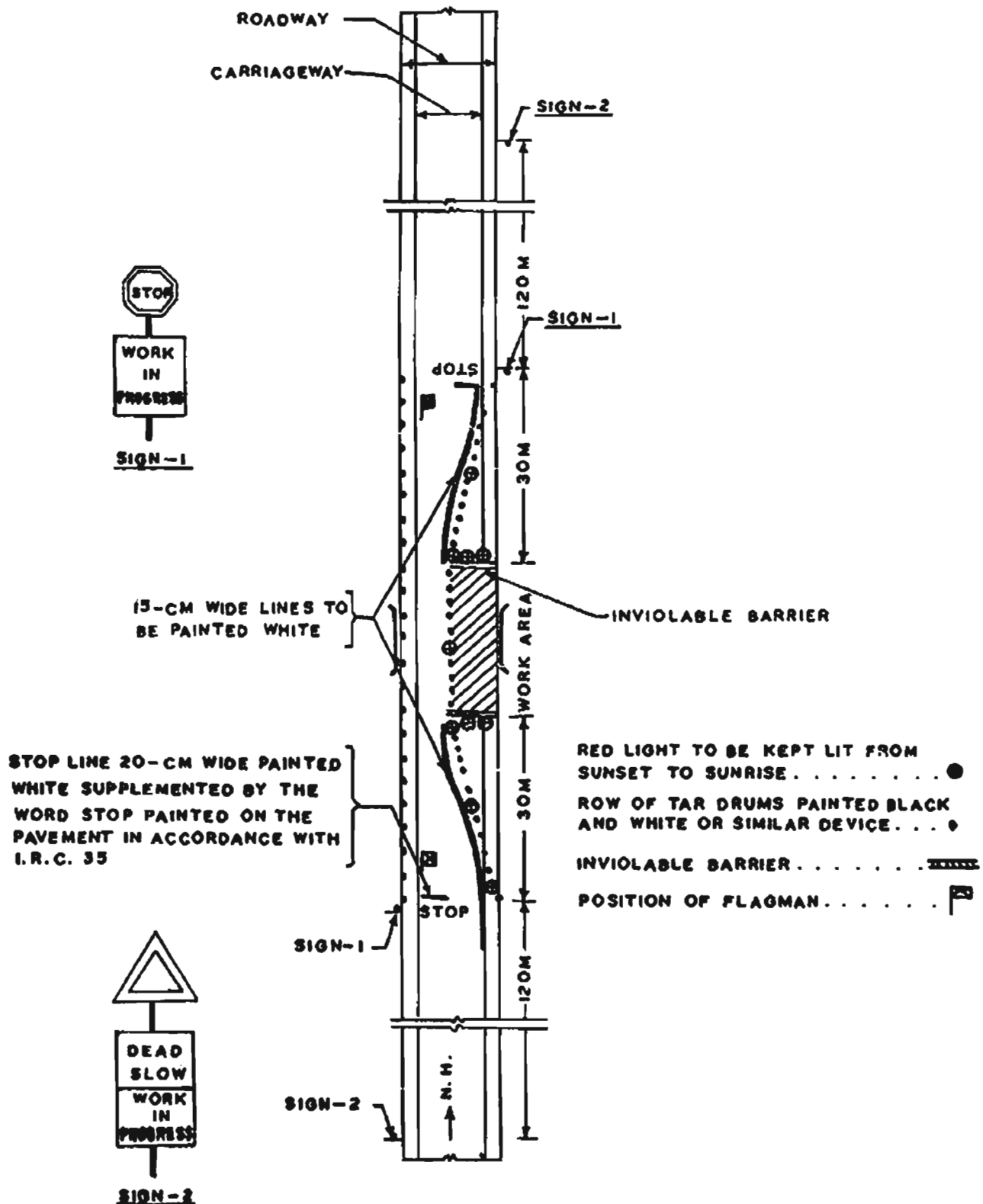
SIGN-3

LEGEND

RED LIGHT TO BE KEPT LIT FROM SUNSET TO SUNRISE ●
DOUBLE ROW OF TAR DRUMS PAINTED BLACK AND WHITE ●

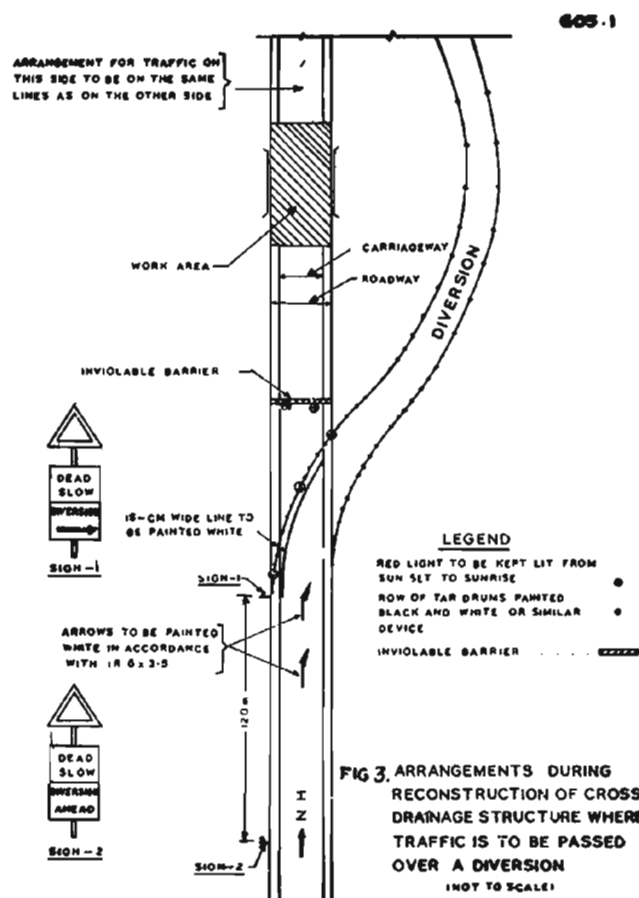
FIG. 1 ARRANGEMENTS FOR TRAFFIC WHEN A SECTION OF N.H. IS TO BE CLOSED DUE TO BREACH OR DAMAGE

(NOT TO SCALE)



ARRANGEMENTS DURING RECONSTRUCTION
OF CROSS DRAINAGE STRUCTURES WHERE TRAFFIC CAN
BE PASSED OVER PART WIDTH OF THE STRUCTURE

(NOT TO SCALE)



3. Arrangements for traffic when widening/reconstruction of an existing cross-drainage structure or construction of a new structure on an existing section is to be carried out

The following instructions should be kept in mind when undertaking above works :

- (i) Traffic may be passed either over part width of the structure, or a temporary diversion, depending on site conditions, intensity & volume of traffic, preferability on economic considerations and other related matters. The former method should be employed as far as possible, specially when the work could be conveniently carried out in half width at a time and there are no undue problems in channeling the traffic through the available road width. In both cases, the work should be so planned that widening/reconstruction of the cross drainage facility is over in the shortest time possible following properly conceived construction schedules. This will be facilitated if all the materials and other equipment are collected at site in advance before the work actually commences;
- (ii) Where for any reason traffic cannot be passed over part width of a structure, a temporary diversion should be constructed. The width and paving specifications for the diversion should be decided on factors like the period for which diversion will be in use, intensity & volume of traffic and climatic conditions. Appropriate consideration must also be given to the avoidance of dust nuisance. On both ends, the diversion should be joined to the main carriageway with smooth transitions, with visibility requirements fully taken care of.
- (iii) One-way traffic operation should be established whenever the traffic is to be passed over part width of a structure. This should be done with the help of flagmen, positioned on opposite sides, who should be on duty during all hours. For regulation of traffic, the flagmen should be equipped with red/green flags and lanterns/lights;
- (iv) At the points where traffic is to deviate from its normal path (whether on temporary diversion or part width of the carriageway), the channel for traffic should be clearly marked with the aid of pavement markings, and painted drums or a similar device. At night, the passage should be delineated with lanterns or other suitable light source. To enhance night visibility, reflectorised paint may be used for the painting of markings and drums;
- (v) Strong barriers of suitable design should be erected on either side of the portion of carriageway closed to traffic, both when the traffic is to be turned to a diversion road or channeled onto part width of the structure. For protection of traffic, red lanterns or warning lights of similar type should be mounted on the barriers at night and kept lit throughout from sunset to sunrise. Besides, barricades should be painted with alternate black and white markings, for which reflectorised paint should be preferred to improve their night visibility;
- (vi) On both sides, suitable regulatory/warning signs should be installed for the guidance of road users. Word message on the signs may be in more than one language as necessary. On each approach at least two signs should be put up, one close to the point where transition of carriageway begins and the other 120 metres away;
- (vii) Signs, lights, barriers and other traffic control devices, as also the temporary diversion, should be kept well-maintained till such time that the traffic is again able to follow its normal path; and
- (viii) Typical arrangements for the two cases where traffic may be passed (i) over part width of a structure or (ii) over a temporary diversion, are illustrated, respectively, in Figs. 2 and 3.

606 ACCIDENTS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
606.1.	NHIII/P/2/77 dt. 15.3.77	Quick removal of Vehicles Involved in Accidents on NHs State Police Authorities Concerned	606/1
606.2.	PL-30(49)/79 dt. 3.7.80	Increased Road Safety-Problems of Accidents on Side Road Junctions	606/1

No. NHIII/P/2/77

Dated the 15th March, 1977

To

All Chief Engineers/Principal Engineers in the States and Union Territories (Deptt. dealing with National Highways)

Sub: Quick removal of vehicles involved in accidents on National Highways by State Police Authorities concerned

Instances have come to the notice of this Ministry where the vehicles involved in accidents on National Highways are allowed to remain at the site of the accidents for long periods for the police authorities to take Panchanama Report etc. resulting in serious discomfort for the fast moving traffic using the National Highway system. As the National Highways are designed for fast moving traffic and the Govt. of India have to make heavy investments on them to cater to the needs of the high speed traffic, obstructions of any kind on the National Highways are undesirable. It appears that the delay in the removal of vehicles and other things from the accident sites is due to the time involved in the arrival of the police party at the sites and the time taken in collecting material for pursuing the matter in the Court of Law. The Govt. of India feel, that in the case of accidents on National Highways the police party should immediately proceed to the site and arrange to remove the vehicles etc. from the National Highway as quickly as possible after the accident, of course after completing needed requirements, in order to enable the free flow of the traffic on the National Highways to be resumed without any delay. I am, therefore, to request that you may kindly consult and discuss the matter with the State Police Authorities concerned to explore the ways and means as to how the vehicles involved in accidents on National Highways could be removed from the site as quickly as possible after the occurrence of the accident and as to how the process could be made speedier to clear the roads.

1.2 One suggestion in this regard is for the police authorities to arrange for the expeditious photograph of the vehicles and other articles involved in the accident at the place of accident, record other necessary evidence and then remove the vehicle from the carriageway.

2. Similarly in some instances, repairs to the vehicles which break down on their journey on the National Highway are also attended to on the National Highway in some cases on the carriageway. This is extremely dangerous to the fast moving traffic using the National Highway system. With the help of the State Police authorities the vehicle (which has to be repaired) should be got removed to the shoulders and repairs effected on the shoulders without causing hindrance to the free flow of traffic using the National Highway system, as otherwise the vehicles which has broken down and left on the National Highway without any red light etc. may lead to another accident.

3. I am further to request you kindly, to send your report in the matter to this Ministry after discussing with the concerned state police authorities at an early date.

4. Immediate action is requested.

No. PL-30 (49)/79

Dated the 3rd July, 1980

To

All State Chief Engineers dealing with Roads

Sub: Increased road safety—Problem of accidents on side road junctions

The problem of increasing accidents on roads has been engaging attention of the Government since quite some time. A detailed study of this aspect was made by the Study Group on Road Safety set up by the Ministry which submitted its report in June '72. Recommendations of the Study Group were circulated among all the State Governments and also considered by the Transport Development Council at its 10th meeting held in Feb. '73. Thereafter the matter was discussed by the Standing Committee of the T.D.C. on Road Transport at its 11th meeting held in November, 1973. The consensus of views at these meetings was that the State Governments should take immediate steps to improve safety on roads based on suggestions made by the Study Group, and earmark separate finances for the same if necessary.

2. In pursuance of the objective to improve safety on roads, Ministry has also been pressing the States for creation of separate Traffic Engineering Cells in the P.W.Ds so that there should be a focal agency to analyse

all the traffic and accident data on a continuing basis, enabling identification of the vulnerable accident-prone spots and the remedial measures to be adopted to these. The issue has figured frequently at other forums too, e.g. Annual Sessions of the IRC, Chief Engineers' meetings etc. A short while back the Ministry had agreed to initial financing of these Traffic Cells against CRF (Allocation) Account of the States. Certain States have already taken advantage of this scheme and set up Traffic Cells of their own. The need for such Cells with properly trained staff cannot be overemphasised. It is therefore requested that the State P.W.Ds should give urgent consideration to setting up of Traffic Cells where this has not been done, and having their officers trained in this discipline. Just now the IRC is organising Road Safety Workshops periodically at different places. The literature put out for these Workshops contains very useful guidance about different aspects of road safety. It should be worthwhile for the State P.W.Ds to take advantage of these Workshops, as also other refresher courses being offered in this field by different organisations, by deputing their officers for participation in these.

3. It has come to Ministry's notice that an important reason contributing to accidents, especially on trunk routes such as National Highways, is the preponderance of poorly designed junctions with side roads meeting the main highway at intervals. Common deficiencies at such junctions are absence of appropriate road signs and markings, lack of necessary channelisation etc. In order to remove this cause of accidents, it is requested that the State Govts. may survey all the National Highways and examine the need for improving the more important side road junctions on these with respect to the need for channelisation, road signs, markings etc. Estimates for such improvements, where necessary, may be sent to the Ministry for sanction on priority basis.

4. Chief Engineers of State P.W.Ds are requested to take early action in above regard and inform the Ministry urgently about the present position of setting up Traffic Engineering Cells, as also survey of the side road junctions along National Highways in need of immediate improvement. Action taken on these points may please be intimated to the Ministry latest by 30th August, 1980.

607 HIGHWAY PATROLLING

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
607.1	DTR (RT)/80/G(10.14) dt 16.2.82	National Highways Patrolling Scheme	607/1
607.2	PL-30 (29)/85 dt 27.3.85	—do—	607/3

No. DTR (RT)/80/G(10.14)

Dated the 16th February, 1982

To

All Home Secretaries/Transport Secretaries of States/Union Territories

Subject : National Highways Patrolling Scheme

This Ministry has been examining the feasibility of introducing a scheme of National Highways Patrolling as a measure preventing occurrence of road accidents and enforcing traffic discipline on the National Highways. Various aspects of the question have been discussed in detail in an interdepartmental meeting.

2. A copy of the Draft Scheme of National Highways Patrolling is enclosed. It has been prepared in consultation with the Bureau of Police Research and Development, Ministry of Home Affairs.

3. Briefly, Draft Scheme envisages that there would be a chain of Traffic Aid Posts (TAPS) located at every 50 kms on the National Highways. The Posts will serve as the monitoring centres for effective maintenance of traffic discipline and also to flash news of accidents if and when occurred. The Traffic Aid posts are to have a communication network, necessary equipment and requisite man-power to do the allotted duties effectively and efficiently. It envisages that the State Government shall administer the Traffic Aid Posts, where at the State level one of the DIGs of Police at Headquarters could supervise and co-ordinate its activities, who would also provide a link as regards information of accidents to the officer in the Central Government in the Ministry of Shipping and Transport. Estimates of expenditure, both recurring and non-recurring for establishing Traffic Aid Posts have been worked out, as given in the enclosed Draft Scheme. However, this will have to be further worked out by the State Governments on the basis of data relating to existing facilities and the proposed programme. According to the present assessment, each Traffic Aid Post will involve a recurring expenditure of Rs 50,000/- and non-recurring expenditure of Rs 2.44 lakhs.

4. All the State Governments are requested to offer their views and suggestions on various aspects of the Scheme. They are also requested to work out a suitable scheme for the respective States with detailed financial implications including the manner in which such an expenditure could be met. The Scheme to be worked out by each State should be based on the number of Traffic Aid Posts they would be setting in the State, taking into account the existing facilities etc.

ESTABLISHMENT OF TRAFFIC AID POSTS ALONG NATIONAL HIGHWAYS

Introduction

The road accidents especially in big cities of the country are showing an upward trend resulting in loss of precious lives and damage to property. The total road accidents increased from 55476 in 1960* to 147651 in 1980* registering an increase of 5% per annum. Similarly the fatalities increased from 5106 in 1960 to 24085 in 1980**, resulting an increase of 7.9% per annum on an average. Although separate data on the accidents occurring on the National Highways are not available, it is well known that the absolute number of such accidents are going up. In Delhi, where the length of National Highways is comparatively small, 19.5% of fatal accidents and 14.2% of the total accidents occurred on the National Highways. This highlights the seriousness of the problem of road accidents on National Highways. Moreover, unlike in urban areas, it is becoming almost impossible to rush medical help to accidents victims in rural areas for want of a proper infrastructure in terms of communication and first-aid arrangements. It is in this context that the Ministry of Shipping and Transport (Transport Wing) are keen on establishing a system of highway patrol, backed by an effective communications network to flash news of accidents to Traffic Aid Posts which have to be provided with recovery vans, mobile cranes and first-aid arrangements to attend to the people/vehicles involved in the accidents.

* Ref : Report on Road Accidents, 1977 by Central Road Research Institute, New Delhi.

** Motor Transport Statistics.

DUTIES OF TRAFFIC AID POST

The duties assigned to the Traffic Aid Posts are as under :

- (i) to give assistance to the motoring public in matters of routes, information regarding nearest petrol pumps, hospitals and police stations and rest houses etc,
- (ii) to give assistance to the injured,
- (iii) to give assistance to vehicles which have broken down, and
- (iv) to convey messages regarding accidents etc., to the police stations, and
- (v) to help the traffic police in approaching defaulting motorists or in establishing the identity.

Those posts already existed in Maharashtra have been found useful for :

- (a) providing better security on the highways,
- (b) detection of overspeeding by vehicles,

- (c) detection of missing or stolen vehicles,
- (d) detection of vehicles involved in hit and run cases,
- (e) detection of smuggling of gold and other contraband goods,
- (f) detection of cases of kidnapping,
- (g) detection of cases of copper wire thefts,
- (h) clearing traffic during journeys of VIPs,
- (i) guiding the tourists with information about nearest doctors, post offices, police stations etc.

PLAN FOR TRAFFIC AID POSTS

- (a) **Location :** One Traffic Aid Post could be located at every 50 kms along the National Highways. It should however be ensured that the traffic aid post is located at such a place where there is no overlapping with the existing Police stations/Police outposts situated along the National Highways. Wherever Police Stations/Police outposts are already available, additional facilities could be provided to them to cater to the needs of new responsibilities.
- (b) **Staffing pattern :** One Head Constable and 7 constables (2 per shift) should be sufficient to man the traffic aid post (+ 1 reserve) round the clock. These constables will be trained in first-aid so that they will be able to render first-aid to the accident victims. All such posts in addition could be under the direct charge of the Supdt., of Police of the concerned district. If the number of such posts exceeds 16 in a district, there should be some supervising staff in the Distt. Police Headquarters. One post of Inspector, Sub-Inspector, Assistant Sub-Inspector each is considered sufficient for this work.

At the State level, one of the Dy. Inspector Generals of Police at the Headquarters, could supervise and coordinate the activities of all the traffic aid posts situated in the State.

At the national level, an officer of the rank of Inspector General of Police with necessary supporting staff can be posted in the Ministry of Shipping and Transport to whom all the State DIGs can report on the accidents, casualties and road safety matters. The existing Directorate of Transport Research will assist this office for the analysis of data of road accidents for identifying causative factors with a view to take speedy remedial measures. The Dte. of Transport Research will have to be strengthened by providing extra staff in order to take up the additional duties and responsibilities.

- (c) **Communication network :** Presently most of the Police Stations are provided with wireless communication facilities and 100% coverage is expected soon for the entire country. Communication link is available among police stations, District Headquarters and state capital and the National Capital is linked with all state capitals.

A 25 WATT VHF set, with a range of 40-50 kms is considered sufficient for the use by Traffic Aid Posts. Provision could be made for increasing the range, in case necessary, by modifying the antenna of the set.

- (d) **Equipment :** It is desirable to provide each Traffic Aid Post with a mobile crane and an Ambulance to attend to the Vehicle Break down on the highways and providing immediate medical aid to the injured, involved in road accidents. But in view of the large scale expenditure involved, to finance such a set-up, it is suggested that one mobile crane and an ambulance could be made available to the respective district Police headquarters for the use of the Traffic Aid Post, provided they are located within a range of 50 kms., from the District Headquarters. Since the Traffic Aid Posts could contact the district headquarters through wireless net-work, the services of the mobile crane and ambulance could be requisitioned without any loss of time from the district concerned or the neighbouring District or State. If the radial distance from the traffic aid post to the district headquarters is more than 50 kms., the above vehicles may be located at the traffic aid posts itself at the rate of one such vehicle for every 2 traffic aid posts.

In addition, the traffic aid posts should be provided with a first aid kit box, a tool box (for attending vehicle breakdown), a set of extricating tools and equipments such as pick axe, portable power saw, crow bars etc., stop sign-boards (reflecting type), torch light etc.

Financial Implication

In order to work out a realistic estimate for establishing a new-work of Traffic Aid Posts, it is necessary to have the following information :

- (i) Data on number of Police Stations/Police outposts located along National Highways.
- (ii) Whether they are provided with wireless communication net-work.
- (iii) Distance between two such Police Stations/Police Out-posts and the distance from P.S/Police outpost to District headquarters.
- (iv) Length of National Highway passing through each district and the maximum and minimum distance from district headquarters to the respective National Highway.

According to the available data, the total road length of National Highways is 31,335 kms. Assuming that a check-post is to be established at every 50 km. of National Highway, 628 check-posts will be required to cover the entire road new-work. However, this number could be brought down after taking into consideration, the possibility of entrusting the duties and responsibilities of Traffic Aid Post to the Police Station/Police outpost already located along the National Highways.

Estimated expenditure for establishing a Traffic Aid Post is Rs. 50,000/- per annum (recurring) and the non-recurring expenditure will be around Rs. 2.44 lakhs the details of which are given in Annexure-1.

Annexure I

RECURRING EXPENDITURE PER TRAFFIC AID POST

S. No.	Category	Nos.	Pay Scale	Annual expenditure in lakhs
1.	Head Constable	1	260 - 350	0.044
2.	Police Constable		225 - 308	0.264
3.	Stationery	—	—	0.050
4.	Maintenance of equipment etc.	—	—	0.142
TOTAL :				0.500 (Approx.)

NON- RECURRING EXPENDITURE PER 1 TRAFFIC AID POST

S. No.	Item	Nos.	Unit cost	Expenditure in lakhs
1.	Recovery Vehicle	½	3,00,000	1.500
2.	Ambulance	½	1,00,000	0.500
3.	VHF Set	1	12,000	0.120
4.	Tools etc.	1	5,000	0.050
5.	First Aid Box	1	500	0.005
6.	Furniture	—	—	0.015
7.	Shelter	1	25,000	0.250
TOTAL :				2.440 (approx)

607.2.

No. PL-30 (29)/85

Dated the 27th March, 1985

To

All ROs/ELOs

As you must be aware, National Highway Patrolling Scheme has been formulated by the Ministry of Shipping and Transport as one of the important measures of road safety and to enforce traffic discipline on National Highways. The scheme has already been launched as a pilot project on five identified sectors of National Highways, viz. Delhi-Chandigarh (NH. 1), Ahmedabad-Surat (NH. 8), Bombay-Kolhapur (NH. 4), Calcutta-Durgapur (NH. 2) and Madras-Dindigul (N.H. 45). A brief note detailing the modalities of the envisaged scheme together with a complement of Traffic-Aid-Posts located approx. 50-60 kms with adequate equipment and personnel is enclosed for your reference and guidance.

2. The TAPs will serve as a monitoring centre for effective maintenance of traffic discipline and also to flash news of accidents as and when these occur. The basic duties and responsibilities of every TAP thus cover the task of immediate flashing of news of accident whenever any occurs, immediate removal of vehicle from the road, provision of First-aid taking the victims to the nearest medical centre, traffic regulation, constant patrolling and checking on traffic violations etc. as elaborated in the enclosed note.

3. In view of the importance of this scheme, the Central Government had decided to finance the scheme for an initial period of one year which includes the cost of equipment as well as that of personnel. The implementation of the scheme inclusive of the cost of personnel will thereafter be the responsibility of the respective State Governments. The State Governments have also been advised that they should formulate their own scheme and implement the same on the remaining sectors.

4. During one of the Review meetings in respect of Road Transport, the matter regarding the implementation of National Highway Patrolling Scheme was also discussed. Transport Secretary has desired that the officials of this Ministry including Superintending Engineers of the Roads Wing may make surprise checks to see the status of implementation of the scheme and functioning of TAPs. You are therefore requested to carry out periodic inspection of the TAPs in your jurisdiction and furnish a report in the prescribed proforma (copy enclosed) to Transport Wing/Roads Wing of the Ministry. This step will facilitate monitoring the efficacy and

functioning of the scheme and of proper utilisation of the funds allocated to the concerned State agency and will also provide necessary feedback with regard to impact of the scheme for prevention of road accidents and enforcement of traffic discipline and general reaction of the public regarding desirability/utility of Highway Patrolling Scheme etc.

PROFORMA FOR INSPECTION AND REPORTING ON THE IMPLEMENTATION OF THE NATIONAL HIGHWAY PATROLLING SCHEME AND FUNCTIONING OF TRAFFIC AID POSTS

National Highway Sector Inspected	No of TAPs		Location of TAPs	TAPs inspected	Status of availability of Equipment for TAPs WRT the sanctioned quantum	Status of personnel positioned that approved	Observations on Functioning of TAPs in relation to accident reporting, medical aid, spot clearance etc.	Observations on Patrolling and traffic discipline duties assigned to TAPs like check on over speeding and over loading, encroachment control, timely, road repairs, fixation of traffic signs/signals, vehicle fitness	Status of maintenance of register of road accidents and efficacy of the system in reducing/preventing accidents and rendering timely help	Comment impact of the scheme for prevention of road accidents & general reaction of public reg. utility/efficacy of scheme
	Sanctioned	Already set up								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

NOTE ON NATIONAL HIGHWAY PATROLLING SCHEME

Highway Patrolling Scheme has been considered as one of the most effective steps in the road safety programmes. The National Highway Patrolling Scheme envisages the setting up of Traffic Aid Posts approximately at every 50-60 kms. with adequate equipment and personnel. Such a Traffic Aid Post has the responsibility of flashing of news of accidents, as and when occurs, rendering immediate first-aid medical assistance to the victim of accidents and taking him to nearest medical centre, removal of the vehicle involved in accident from the road, and patrolling of the assigned area, discharging functions such as exercising check on over-loading and over-speeding and ensuring observance of road laws by the users of National Highways.

For the purpose of a pilot project, the five sectors of National Highways were identified in consultation with the Director General (Road Development) of this Ministry. The choice of these sectors, apart from their being accident prone due to heavy traffic, was that these would cover various regions of the country viz. Northern, Western, Eastern and Southern and that the results of the implementation of the scheme would serve an example for implementation of similar schemes in other areas of the region.

After consultation with concerned State Governments the National Highway Patrolling Scheme had been launched, as a pilot project, on five selected sectors of National Highways as per the details given below :

S. No.	Name of State	Highway	Sectors selected for patrol	No. of TAPS decided to be set up	No. of TAPs already set up
1.	(a) Haryana	NH. 1	Delhi-Chandigarh	5	5 (19.11.83)
	(b) Delhi	—do—	—do—	1	1 (31.5.84)
	(c) Punjab	—do—	—do—	1	1 (19.11.83)
2.	West Bengal	NH. 2	Calcutta-Durgapur	4	4 (14.1.84)
3.	Gujarat	NH. 8	Ahmedabad-Surat	5	1 (1.6.84)
4.	Maharashtra	NH. 4	Bombay-Kolhapur	10	10 (14.1.84)
5.	Tamil Nadu	NH. 45	Madras-Dindigal	10	1 (14.1.84)
				36	23

6. Out of 36 Traffic Aid Posts decided to be set up, 23 Traffic Aid Posts have already been made operational.

7. The pattern of Staff and Equipment for the Traffic Aid Posts, as agreed to in the meetings with the representatives of the States, is as follows :

A. Equipment Items for each Traffic Aid Post :

1. Crane (one for a certain number of TAPs)
2. Diesel Jeep/Station Wagon (Station Wagon-cum-Ambulance)

3. Ambulance
4. First-Aid-Box
5. **oxygen Cylinder**
6. Camera
7. Speed-radar
8. Misc. item like torches, identification bands on uniform badges, furniture.
9. Telephone to be provided by the State Governments
10. Wireless-Set VHF
11. Motor Cycle

B. Requirement of Personnel for each TAP :

- | | |
|-----------------------------------|---|
| 1. Sub-Inspector | 1 |
| 2. Head Constable | 3 |
| 3. Constable | 6 |
| 4. Male Nurse/Compounder | 1 |
| 5. Photographer (constable) | 1 |
| 6. Helper for Ambulance and Crane | 3 |
| 7. Driver of Ambulance | 2 |
| 8. Driver of Crane | 2 |
| 9. Driver of Patrol Vehicle | 2 |
| 10. Wireless Operator | 2 |

C. Each TAP is entrusted with the responsibility of

- (a) Flashing of news of accidents, as and when any mishap occurs,
- (b) rendering immediate first-aid medical assistance to the victims of accidents and taking him to nearest medical centre,
- (c) removal of the vehicle involved in accident from the road, and
- (d) regular patrolling of the assigned area, discharging functions such as exercising check on over-loading and over speeding and ensuring observance of road laws by the users of National Highways.

8. The duties and responsibilities of the Traffic Aid Post are further detailed as under :—

- (a) Constant patrolling through patrolling squads to regulate traffic to ensure the flow of traffic on Highways and avoid congestion :
- (b) immediate flashing of the news of the road accidents as and when it occurs;
- (c) provision of First Aid to the victim;
- (d) completing necessary legal formalities in consultation with the investigating police officers;
- (e) taking the victim to the nearest medical centre by appropriate care;
- (f) removal of the vehicle involved in the accident from the road;
- (g) intimating the concerned PWD authorities for repair of any road patch considered dangerous for the purpose of smooth movement of vehicles on the roads;
- (h) getting repaired through PWD the road patches of road caused due to rain or natural calamities like blocking of road by avalanches or other causes;
- (i) ensuring in consultation with the PWD Authorities the fixation of traffic signs and signals.
- (j) strict watch to ensure that there are no encroachments within the stipulated area along national highways;
- (k) to keep a watch on traffic violations such as over-speeding and over-loading which are hazardous to road safety and flash information regarding such cases to Competent Authority for suitable action. Similarly if at any time any run away vehicle or stolen vehicle is detected, the information should be flashed to the Police Control Rooms. Particular attention should also be given to the following aspects for ensuring safe traffic movement :
 - (1) the lighting system of the bus, truck and other vehicles;
 - (2) slow moving vehicles on separate lanes;
 - (3) fitness of the vehicle;
 - (4) speed limit;
- (l) providing general information to the motorists;
- (m) maintenance of registers of road accidents giving correct information as to the cause of accident and other details including vehicle condition/road condition etc.
- (n) maintenance of records like general information book, road maps, First-Aid Manual.

10. After the several meetings taken by Joint Secretary (Transport) with the representatives of the concerned State Governments/ Union Territory Administrations, the agreed pattern of requirements of Staff and equipment as finally emerged is as given in para 7 above. The estimates were worked out. In view of the newness of the schemes, exact financial requirements could not be pinpointed but tentative estimates were worked out, which indicated that for each TAP :—

- (i) the non-recurring cost (on equipment) would be Rs 6 lakhs;
- (ii) the recurring expenditure (on staff) would be Rs 2 lakhs.

11. For the year 1983-84, a provision was made of Rs 70 lakhs which was disbursed as follows :—

S. No.	Name of State	Salary (Rs in lakhs)	Equipment
1.	Haryana	2.00	15.00
2.	Delhi	—	3.50
3.	Punjab	0.40	3.10
4.	Gujarat	—	11.00
5.	Maharashtra	2.10	12.90
6.	Tamil Nadu	0.50	9.50
7.	West Bengal	2.00	8.00

The amount represented cost of equipment exclusive of crane and expenditure on staff from the date of setting up of TAPs.

12. For the year 1984-85, total provision for road safety programme including highway patrol scheme is of Rs 2 crores. Out of this amount, following release are already made :—

S. No.	Name of State	Salary (Rs in lakhs)	Equipment (Rs in lakhs)
1.	Haryana	6.40	10.50
2.	Delhi	1.68	3.00
3.	Punjab	1.28	3.40
4.	Gujarat	1.68	—
5.	Maharashtra	14.70	34.60
6.	Tamil Nadu	1.18	—
7.	West Bengal	4.72	11.00

608 MOTOR VEHICLES ACT & ORDERS THEREUNDER

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
608.1.	Extract from Motor Vehicles Act, 1939		608/1
608.2	TGM (18)/82 dt. 25.9.82	Notification SO No. 690 (E) —Maximum Safe Laden Weight of Motor Vehicles	608/10
608.3.	TW/TGM (26)/82 dt. 10.12.82	Notification G.S.R. 846 (E) —Transport Vehicle Dimensions	608/11
608.4.	TW/TGM (26)/82 dt. 15.4.83	Notification G.S.R. 295 (EE) —Tyre Rules	608/14
608.5	PL-30 (106)/82 dt. 12.5.83	Assignment of RLW/SAW of Transport Vehicles—reference of Central Govt. & Rating of Existing Weak Bridges	608/17
608.6.	RW/PL-30 (106)/82 dt. 17.5.83	—do—	608/20
608.7. 4310	RW/NH-III/P/13/85 dt. 27.6.85	Imposition of Load Restriction on weak Stretches	See Code No. 4310

EXTRACT FROM MOTOR VEHICLES ACT, 1939

⁵⁸[³⁶Special provisions in regard to transport vehicles — (1) Having regard to the number, nature and size of the tyres attached to the wheels of a transport vehicle, other than a motor cab, and its make and model and other relevant considerations, ^{58a}[the Central Government, may] by notification in the Official Gazette, specify in relation to each make and model of a transport vehicle the maximum safe laden weight of such vehicle and the maximum safe axle weight of each axle of such vehicle.

(2) A registering authority, when registering a transport vehicle other than a motor cab, shall enter in the record of registration and shall also enter in the certificate of registration of the vehicle the following particulars, namely :—

- (a) the unladen weight of the vehicle;
- (b) the number, nature and size of the tyres attached to each wheel;
- (c) the registered laden weight of the vehicle and the registered axle weights pertaining to the several axles thereof; and
- (d) if the vehicle is used or adapted to be used for the carriage of passengers solely or in addition to goods, the number of passengers for whom accommodation is provided;

and the owner of the vehicle shall have the same particulars exhibited in the prescribed manner on the vehicle.

(3) There shall not be entered in the certificate of registration of any such vehicle any laden weight of the vehicle or a registered axle weight of any of its axles ⁵⁹[different from that] specified in the notification under sub-section (1) in relation to the make and model of the vehicle and to the number, nature and size of the tyres attached to its wheels :

Provided that where it appears to ^{59a}[the Central Government] that heavier weights than those specified in the notification under sub-section (1) may be permitted in a particular locality for vehicles of a particular type, ^{59a}[the Central Government] may, by order in the Official Gazette, direct that the provisions of this sub-section shall apply with such modifications as may be specified in the order.

(4) When by reason of any alteration in such vehicle, including an alteration in the number, nature or size of its tyres, the registered laden weight of the vehicle or the registered axle weight of any of its axles no longer accords with the provisions of subsection (3), the provisions of Section 32 shall apply and the registering authority shall enter in the certificate of registration of the vehicle revised registered weights which accord with the said sub-section.

(5) In order that the registered weight entered in the certificate of registration of a vehicle may be revised in accordance with the provisions of sub-section (3), the registering authority may require the owners of transport vehicles in accordance with such procedure as may be prescribed to produce the certificates of registration within such time as may be specified by the registering authority.]

CHAPTER IV

CONTROL OF TRANSPORT VEHICLES

42. *Necessity for permits.* — (1) No owner of a transport vehicle shall use or permit the use of the vehicle in any public place ⁸⁰[(whether or not such vehicle is actually carrying any passenger or goods)] save in accordance with the conditions of a permit granted or countersigned by a Regional or State Transport Authority ⁸¹[or the Commission] authorising the use of the vehicle in that place in the manner in which the vehicle is being used :

Provided that a stage carriage permit shall, subject to any conditions that may be specified in the permit, authorise the use of the vehicle as a contract carriage :

Provided further that a stage carrier's permit may, subject to any conditions that may be specified in the permit, authorise the use of the vehicle as a goods vehicle either when carrying passengers or not :

58. Subs. by S. 32, *ibid.*, for the former Ss. 36 and 37 (w.e.f. 15-1-1959).

58a. Subs. by Act 47 of 1982 (w.e.f. 1-10-1982).

59. Subs. by Act 56 of 1969, S. 14, for "in excess of that" (w.e.f. 2-3-1970).

59a. Subs. by Act 47 of 1982 (w.e.f. 1-10-1982).

75. Ins. by Act 47 of 1978, S. 19 (w.e.f. 16-1-1979).

76. Old cl. (i) omitted by Act 100 of 1956, S. 35 (w.e.f. 16-2-1957).

77. Ins. by Act 20 of 1942, S. 12.

78. Subs. by Act 100 of 1956, S. 35 for "Delivery vans" (w.e.f. 16-2-1957).

79. Ins. by Act 47 of 1978 of 1978, S. 19 (w.e.f. 16-1-1979).

80. Ins. by Act 56 of 1969, S. 17 (w.e.f. 2-3-1970).

81. Ins. by Act 100 of 1956, S. 36 (w.e.f. 16-2-1957).

Provided further that a public carriage permit shall, subject to any conditions that may be specified in the permit, authorise the holder to use the vehicle for the carriage of goods for or in connection with a trade or business carried on by him.

(2) In determining, for the purposes of this Chapter, whether a transport vehicle is or is not used for the carriage of goods for hire or reward :—

- (a) the delivery or collection by or on behalf of the owner of goods sold, used or let on hire or hire-purchase in the course of any trade or business carried on by him other than the trade or business of providing transport,
- (b) the delivery or collection by or on behalf of the owner of goods which have been or which are to be subjected to a process or treatment in the course of a trade or business carried on by him, or
- (c) the carriage of goods in a transport vehicle by a manufacturer of or agent or dealer in such goods whilst the vehicle is being used for demonstration purposes,

shall not be deemed to constitute a carrying of the goods for hire or reward; but the carriage in a transport vehicle of goods by a person not being a dealer in such goods who has acquired temporary ownership of the goods for the purpose of transporting them to another place and there relinquishing ownership shall be deemed to constitute a carrying of the goods for hire or reward.

(3) Sub-section (1) shall not apply —

- ⁸²(a) to any transport vehicle owned by the Central Government or a State Government and used for Government purposes unconnected with any commercial enterprise;]
- (b) to any transport vehicle owned by a local authority or by a person acting under contract with a local authority and used solely for road cleansing, road watering or conservancy purposes;
- (c) to any transport vehicle used solely for police, fire brigade or ambulance purposes;
- (d) to any transport vehicle used solely for the conveyance of crops;
- (e) to any transport vehicle used for towing a disabled vehicle or for removing goods from a disabled vehicle to a place of safety;
- ⁸³(ee) to any transport vehicle owned by a manufacturer of automobiles and used solely for such purpose as may be approved by the Central Government;]
- (f) to any transport vehicle used for any other public purpose prescribed in this behalf;
- ⁸⁴(ff) to any transport vehicle used by a person who manufactures or deals in motor vehicles or builds bodies for attachment to chassis, solely for such purposes and in accordance with such conditions as the Central Government may, by notification in the Official Gazette, specify in this behalf;]
- (g) to any transport vehicle owned by, and used solely for the purposes of, any educational institution which is recognised by the State Government or whose managing committee is a society registered under the Societies Registration Act, 1860 (21 of 1960);
- ⁸⁵* * * * *
- (i) ⁸⁷[except as may otherwise be prescribed], to any goods vehicle which is a light motor vehicle and does not ply for hire or reward, or to any two-wheeled trailer with a registered laden weight not exceeding ⁸⁸[800 kilograms] drawn by a motor car;]
- ⁸⁹(j) subject to such conditions as the Central Government may, by notification in the Official Gazette, specify, to any transport vehicle purchased in one State and proceeding to a place, situated in any other State, without carrying any passenger or goods;
- (k) to any transport vehicle which has been temporarily registered under Section 25, while proceeding empty to any place for the purpose of registration of the vehicle under Section 24;
- (l) to any transport vehicle used for such purposes (other than plying for hire or reward) as the Central Government may, by notification in the Official Gazette, specify;
- (m) to any transport vehicle which, owing to flood, earthquake or any other natural calamity, is required to be diverted through any other route, whether within or outside the State, with a view to enabling it to reach its destination; or
- (n) to any transport vehicle while proceeding empty to any place for purpose of repair.

Subject to the provisions of sub-section (3), sub-section (1) shall, if the State Government by rule made under Section 68 so prescribes, apply to any motor vehicle adapted to carry more than nine ⁹⁰[persons] excluding the driver.

43. *Power of State Government to control road transport* — (1) A State Government, having regard to —

- (a) the advantages offered to the public, trade and industry by the development of motor transport, and

82. Subs. by Act 100 of 1956, S. 36, for the former clause (a) (w.e.f. 16-2-1957).

83. Ins. by S. 36, *ibid.* (w.e.f. 16-2-1957) and shall stand omitted by Act 56 of 1969, S. 17 (from a date to be notified).

84. Ins. by Act 56 of 1969, S. 17. (w.e.f. a date to be notified).

85. Omitted by Act 25 of 1968, S. 2 and Sch. (w.e.f. 15-9-1968).

86. Subs. by Act 100 of 1956 by S. 36, for the former clause (w.e.f. 16-2-1957).

87. Shall stand omitted by Act 56 of 1969, S. 17 (w.e.f. a date to be notified).

88. Subs. by Act 51 of 1960, S. 3, for "1,700 pounds avoirdupois" (w.e.f. 1-1-1961).

89. Clauses (j) to (n) ins. by Act 56 of 1969, S. 17 (w.e.f. a date to be notified).

90. Subs. by Act 100 of 1956, S. 36, for "passengers" (w.e.f. 16-2-1957).

- (b) the desirability of co-ordinating road and rail transport, and
- (c) the desirability of preventing the deterioration of the road system, and
- (d) the desirability of preventing uneconomic competition among motor vehicles,

⁹¹[may, from time to time, by notification in the Official Gazette, issue directions to the State Transport Authority —

- (i) regarding the fixing of fares and freights ⁹²[including the maximum and minimum in respect thereof] for stage carriages, contract carriages and public carriers;
- (ii) regarding the prohibition or restriction, subject to such conditions as may be specified in the directions, of the conveying of long distance goods traffic generally, or of specified classes of goods, by private or public carriers;
- (iii) regarding the grant of permits for alternative routes or areas, to persons in whose cases the existing permits ⁹²are not renewed in pursuance of the provisions of sub-section (1-D) of Section 68-F, or] are cancelled or the terms thereof are modified in exercise of the powers conferred by clause (b) or clause (c) of sub-section (2) of Section 68-F;
- (iv) regarding any other matter which may appear to the State Government necessary or expedient for giving effect to any agreement entered into with the Central Government or any other State Government or the Government of any other country relating to the regulation of motor transport generally, and in particular to its co-ordination with other means of transport and the conveying of long distance goods traffic :

Provided that no such notification shall be issued unless a draft of the proposed directions is published in the Official Gazette specifying therein a date being not less than one month after such publication, on or after which the draft will be taken into consideration and any objection or suggestion which may be received has, in consultation with the State Transport Authority, been considered after giving the representatives of the interests affected an opportunity of being heard.]

CHAPTER V

CONSTRUCTION, EQUIPMENT AND MAINTENANCE OF MOTOR VEHICLES

69. *General provision regarding construction and maintenance.* — Every motor vehicle shall be so constructed and so maintained as to be at all times under the effective control of the person driving the vehicle.

³⁴[96-A. *Vehicles to have right hand control.* — Every motor vehicle shall be so constructed as to have right hand steering control unless it is equipped with a mechanical or electrical signalling device of a prescribed nature]

^{34a}[69-B. *Power of Central Government to make rules.* — (1) The Central Government may make rules regulating the construction, equipment and maintenance of motor vehicles and trailers with respect to any of the following matters, namely :—

- (a) the width, height, length and overhang of vehicles and of the loads carried;
- (b) the size, nature and condition of tyres.

(2) Rules may be made under sub-section (1) governing the matters mentioned therein either generally in respect of motor vehicles or trailers or in respect of motor vehicles or trailers of a particular class or in particular circumstances.]

70. *Power to make rules.* — (1) A State Government may make rules regulating the construction, equipment and maintenance of motor vehicles and trailers ^{34b}[with respect to all matters other than the matters referred to in clause (a) or clause (b) of sub-section (1) of Section 69-B].

(2) Without prejudice to the generality of the foregoing power, rules may be made under this section governing any of the following matters, either generally in respect of motor vehicles or trailers or in respect of motor vehicles or trailers of a particular class or in particular circumstances namely—

- (a) ^{34c}[* * * * *]
- (b) seating arrangements in public service vehicles and the protection of passengers against the weather;
- (c) ^{34c}[* * * * *]
- (d) brakes and steering gear;
- (e) the use of safety glass;
- (f) signalling appliances, lamps and reflectors;
- (g) speed governors;

91. Subs. by S. 37, *ibid.*, for certain original words (w.e.f. 16-2-1957).

92. Ins. by Act 56 of 1969, S. 18. (w.e.f. 2-3-1970).

34. Ins. by Act 56 of 1969, S. 47 (w.e.f. 2-3-1970).

34a. Ins. by Act 47 of 1982, S. 45 (w.e.f. 10-12-1982).

34b. Ins. by Act 47 of 1982, (w.e.f. 10-12-1982).

34c. Omitted by Act 47 of 1982, (w.e.f. 10-12-1982).

- (h) the emission of smoke, visible vapour, sparks, ashes, grit or oil;
- (i) the reduction of noise emitted by or caused by vehicles;
- (j) prohibiting or restricting the use of audible signals at certain times or in certain places;
- (k) prohibiting the carrying of appliances likely to cause annoyance or danger;
- (l) the periodical testing and inspection of vehicles by prescribed authorities;
- (m) the particulars other than registration marks to be exhibited by vehicles and the manner in which they shall be exhibited; and
- (n) the use of trailers with motor vehicles.

CHAPTER VI

CONTROL OF TRAFFIC

71. *Limits of speed.* — (1) No person shall drive a motor vehicle or cause or allow a motor vehicle to be driven in any public place at a speed exceeding the maximum speed fixed for the vehicle by or under this Act or by or under any law for the time being in force :

Provided that such maximum speed shall in no case exceed the maximum fixed for the vehicle in the Eighth Schedule.

- (2) The State Government or any authority authorised in this behalf by the State Government may, if satisfied that it is necessary to restrict the speed of motor vehicles in the interests of public safety or convenience or because of the nature of any road or bridge, by notification in the Official Gazette, ³⁵[and by causing appropriate traffic signs to be placed or erected under Section 75 at suitable places,] fix such maximum speed limits as it thinks fit for motor vehicles or any specified class of motor vehicles or for motor vehicles to which a trailer is attached, either generally or in a particular area or on a particular road or roads :

³⁵[Provided that where any restriction under this section is to remain in force for not more than one month, notification thereof in the Official Gazette shall not be necessary.]

³⁵[(3) Nothing in this section shall apply to any vehicle registered under Section 39 while it is being used in the execution of military manoeuvres within the area and during the period specified in the notification under sub-section (1) of Section 2 of the Manoeuvres, Field Firing and Artillery Practice Act, 1938 (5 of 1938).]

72. *Limits of weight and limitations on use.* — (1) The State Government may prescribe conditions for the issue of permits for ³⁶[heavy goods vehicles or heavy passenger motor vehicles by the State or Regional Transport Authorities and may prohibit or restrict the use of such vehicles in any area or route within the State.

³⁷ * * * * *

- (2) Except as may be otherwise prescribed, no person shall drive or cause or allow to be driven in any public place any motor vehicle which is not fitted with pneumatic tyres.

- (3) No person shall drive or cause or allow to be driven in any public place any motor vehicle or trailer —

(a) the unladen weight of which exceeds the unladen weight specified in the certificate of registration of the vehicle, or

(b) the laden weight of which exceeds the registered laden weight specified in the certificate of registration,

³⁸ * * *

³⁹ * * * * *

- (4) Where the driver or person in charge of a motor vehicle or trailer driven in contravention of sub-section (2) or clause (a) of sub-section (3) is not the owner, a Court may presume that the offence was committed with the knowledge of or under the orders of the owner of the vehicle or trailer.

73. *Power to have vehicle weighed.* — ⁴⁰[(1)] Any person authorised in this behalf of the State Government may if he has reason to believe that a goods vehicle or trailer is being used in contravention of Section 72, required the driver to convey the vehicle to a weighing device, if any, within a distance of ⁴¹[2 kilometres] from any point on the forward route or within a distance of ⁴²[10 kilometres] from the destina-

³⁵ Ins. by Act 100 of 1956, S. 63 (w.e.f. 16-2-1957).

³⁶ Subs. for "heavy motor vehicles" by Act 47 of 1978, S. 29 (w.e.f. 16-1-1979).

³⁷ Proviso omitted by Act 100 of 1956, S. 64 (w.e.f. 16-2-1957).

³⁸ The word "or" omitted by S. 64 *Ibid.*, (w.e.f. 16-2-1957).

³⁹ Cl. (c) omitted by S. 64 *Ibid.*, (w.e.f. 16-2-1957).

⁴⁰ S. 73 renumbered as sub-section (1) thereof by S. 65, *Ibid.* (w.e.f. 16-2-1957).

⁴¹ Subs. by Act 51 of 1960, S. 4 for "one mile" (w.e.f. 1-1-1961).

⁴² Subs. by S. *Ibid.*, for "five miles" (w.e.f. 1-1-1961).

tion of the vehicle for weighment; and if on such weighment the vehicle is found to contravene in any respect the provisions of Section 72 regarding weight, he may, by order in writing, direct the driver to convey the vehicle or trailer to the nearest place, to be specified in the notice, where facilities exist for the storage of goods, and not to remove the vehicle or trailer from that place until the laden weight ⁴³ * * * has been reduced or the vehicle has otherwise been treated so that it complies with Section 72.

⁴⁴[(2) Where any excess goods are removed from any goods vehicle or trailer for storage under sub-section (1) such person as may be authorised in this behalf by the State Government shall cause a notice in writing to be served on the owner of the vehicle or trailer, as the case may be, requiring him to remove the goods within the time to be specified in the notice and if the owner of the vehicle or trailer refuses or fails to remove the goods within the time specified, the authorised person may sell the goods by public auction and the balance of the sale proceeds, after deducting therefrom the charges for the storage of the goods and the costs incidental to the sale, shall be paid to the owner of the vehicle or trailer, as the case may be :

Provided that where the excess goods removed are of a perishable nature, the sale can be held immediately after causing the notice to be served on the driver of the vehicle or trailer.]

74. *Power to restrict the use of vehicles.* — The State Government or any authority authorised in this behalf by the State Government, if satisfied that it is necessary in the interests of public safety or convenience, or because of the nature of any road or bridge, may by notification in the Official Gazette, prohibit or restrict, subject to such exceptions and conditions as may be specified in the notification, the driving of motor vehicle or of any specified class of motor vehicles or the use of trailers either generally in a specified area or on a specified road ⁴⁵ and when any such prohibition or restriction is imposed, shall cause appropriate traffic signs to be placed or erected under Section 75 at suitable places :

Provided that where any prohibition or restriction under this section is to remain in force for not more than one month, notification thereof in the Official Gazette, shall not be necessary, but such local publicity as the circumstances may permit, shall be given of such prohibition or restriction.]

75. *Power to erect traffic signs.* — (1) The State Government or any authority authorised in this behalf by the State Government may cause or permit traffic signs to be placed or erected in any public place for the purpose of ⁴⁶[bringing to public notice any speed limits fixed under sub-section (2) of Section 71 or any prohibitions or restrictions imposed under Section 74, or generally for the purpose of regulating motor vehicle traffic.

(2) Traffic signs erected under sub-section (1) for any purpose for which provision is made in the Ninth Schedule shall be of the size, colour and type and shall have the meanings set forth in the Ninth Schedule, but the State Government or any authority empowered in this behalf by the State Government may make or authorise the addition to any sign set forth in the said Schedule, of transcriptions of the words, letters or figures thereon in such script as the State Government may think fit, provided that the transcriptions shall be of similar size and colour to the words, letters or figures set forth in the Ninth Schedule.

(3) Except as provided by sub-section (1) no traffic sign shall, after the commencement of this Act, be placed or erected on or near any road; but all traffic signs erected prior to the commencement of this Act by any competent authority shall for the purposes of this Act be deemed to be traffic signs erected under the provisions of sub-section (1).

(4) A State Government may, by notification in the Official Gazette, empower any District Magistrate or Superintendent of Police ⁴⁷[or, in the Presidency towns, the ⁴⁸[Chief Metropolitan Magistrate] or the Commissioner of Police] to remove or cause to be removed any sign or advertisement which is so placed in his opinion as to obscure any traffic sign from view or any sign or advertisement which is in his opinion so similar in appearance to a traffic sign as to be misleading.

⁴⁹[(5) No person shall wilfully remove, alter, deface, or in any way tamper with traffic signs placed or erected under this section.

(6) If any person accidentally causes damage to a traffic sign as renders it useless for the purpose for which it is placed or erected under this section, he shall report the circumstances of the occurrence to a police officer or at a police station as soon as possible, and in any case within twenty-four hours of the occurrence.

43. The words "or axle weight" omitted by Act 100 of 1956, S. 65 (w.e.f. 16-2-1957).

44. Ins. by Act 100 of 1956, S. 65 (w.e.f. 16-2-1957).

45. Added by Act 100 of 1956, S. 66 (w.e.f. 16-2-1957).

46. Ins. by S. 67 *ibid.* (w.e.f. 16-2-1957).

47. Ins. by Act 20 of 1942, S. 17.

48. Subs. by Act 47 of 1978, S. 30 (w.e.f. 16-1-1979).

49. Ins. by Act 100 of 1956, S. 67 (w.e.f. 16-2-1957).

(7) For the purpose of bringing the signs set forth in the Ninth Schedule in conformity with any International Convention relative to motor traffic to which the Central Government is for the time being a party, the central Govt. may, by notification in the Official Gazette make any addition or alteration to any such sign and on the issue of any such notification, the Ninth Schedule shall be deemed to be amended accordingly.

76. *Parking places and halting stations.* — The State Government or any authority authorised in this behalf by the State Government may, in consultation with the local authority having jurisdiction in the area concerned, determine places at which motor vehicles may stand either indefinitely or for a specified period of time, and may determine the places at which public service vehicles may stop for a longer time than is necessary for the taking up and setting down of passengers.

77. *Main Roads.* — A State Government or any authority authorised in this behalf by the State Government may, by notification in the Official Gazette or by the erection at suitable places of the appropriate traffic sign referred to in Part A of the Ninth Schedule, designate certain roads as main roads for the purposes of the regulations contained in the Tenth Schedule.

78. *Duty to obey traffic signs.* — ⁵⁰[(1) Every driver of a motor vehicle shall drive the vehicle in conformity with any indication given by ⁵¹[a mandatory traffic sign] and in conformity with the driving regulations set forth in the Tenth Schedule, and shall comply with all directions given to him by any police officer for the time being engaged in the regulation of traffic in any public place.

⁵²[(2) In this section "mandatory traffic sign" means a traffic sign included in Part A of the Ninth Schedule, or any traffic sign of similar form (that is to say, consisting of or including a circular displaying a device, word or figure and having a red ground or border) erected for the purpose of regulating motor vehicle traffic under sub-section (1) of Section 75.]

79. *Signals and signalling devices.* — ⁵³[(1) The driver of a motor vehicle ⁵⁴[with a right hand steering control] shall on the occasions specified in the Eleventh Schedule make the signals specified therein

Provided that the signal of an intention to turn to the right or left or to stop may be given by a mechanical or an electrical device of a prescribed nature affixed to the vehicle.

⁵⁵[(2) In the case of a motor vehicle with a left hand steering control, the signal of an intention to turn to the right or left or to stop shall be given by a mechanical or an electrical device of a prescribed nature affixed to the vehicle :

Provided that Government may, having regard to the width and condition of the roads in any area or route, by notification in the Official Gazette exempt, subject to such conditions as may be specified therein, any such motor vehicle or class of such motor vehicles from the operation of this sub-section for the purpose of plying in that area or route.

80. *Vehicles with left hand control.* — No person shall drive or cause or allow to be driven in any public place any motor vehicle with a left hand steering control unless it is equipped with a mechanical or electrical signalling device of a prescribed nature and in working order :

[Provided that Government may, having regard to the width and condition of the roads in any area or route, by notification in the Official Gazette exempt, subject to such conditions as may be specified therein, any such motor vehicle or class of such motor vehicles from the operation of this section for the purpose of plying in that area or route.]

81. *Leaving vehicle in dangerous position.* — No person in charge of a motor vehicle shall cause or allow the vehicle or any trailer to remain at rest on any road in such a position or in such a condition or in such circumstances as to cause or be likely to cause danger, obstruction of undue inconvenience to other users of the road.

82. *Riding on running board.* — No person driving or in charge of a motor vehicle shall carry any person or permit any person to be carried on the running board or otherwise than within the body of the vehicle.

⁵⁰. Section 78 renumbered as sub-section (1) thereof by Act 20 of 1942, S. 18.

⁵¹. Subs. by S. 18, *Ibid.* for "a traffic sign included in Part A of the Ninth Schedule".

⁵². Added by Act 20 of 1942, S. 18.

⁵³. Renumbered as sub-section (1) by Act 56 of 1969, S. 48 (w.e.f. 2-3-1970).

⁵⁴. Ins. by Act 56 of 1969, S. 48 (w.e.f. 2-3-1970).

⁵⁵. Ins. by Act 56 of 1969, S. 49 (w.e.f. 2-3-1970).

89. *Duty of driver in case of accident and injury to a person.* — When any person is injured ⁶¹[or any property of a third party is damaged,] as the result of an accident in which a motor vehicle is involved, the driver of the vehicle or other person in charge of the vehicle shall —

- (a) take all reasonable steps to secure medical attention for the injured person, and, if necessary, convey him, to the nearest hospital, unless the injured person or his guardian, in case he is a minor, desires otherwise;
- (b) give on demand by a police officer any information required by him, or, if no police officer is present, report the circumstances of the occurrence at the nearest police station as soon as possible, and in any case within twenty-four hours of the occurrence

90. *Inspection of vehicle involved in accident.* — When any accident occurs in which a motor vehicle is involved, any person authorised in this behalf by the State Government may, on production if so required of his authority, inspect the vehicle and for that purpose may enter at any reasonable time any premises where the vehicle may be, and may remove the vehicle for examination :

Provided that the place to which the vehicle is so removed shall be intimated to the owner of the vehicle and the vehicle shall be returned without unnecessary delay.

91. *Power to make rules.* — (1) The State Government may make rules for the purpose of carrying into effect the provisions of this Chapter.

(2) Without prejudice to the generality of the foregoing power, such rules may provide for —

- (a) the nature of the mechanical or electrical signalling devices which may be used on motor vehicles;
- (b) the removal and the safe custody of vehicles including their loads which have broken down or which have been left standing or have been abandoned on roads;
- (c) the installation and use of weighing devices;
- ⁶²[(cc) the maintenance and management of godowns for the storage of goods removed from overloaded vehicles and the fees, if any, to be charged for the use of such godowns];
- (d) the exemption from all or any of the provisions of this Chapter of Fire Brigade vehicles, ambulances and other special classes of vehicle, subject to such conditions as may be prescribed;
- (e) the maintenance and management of parking places and stands and the fees, if any, which may be charged for their use;
- (f) prohibiting the driving down hill of a motor vehicle with the gear disengaged either generally or in a specified place;
- (g) prohibiting the taking hold of or mounting of a motor vehicle in motion;
- (h) prohibiting the use of foot-paths or pavements by motor vehicles :
- (i) generally, the prevention of danger, injury, or annoyance to the public or any person, or of danger or injury, to property or of obstruction to traffic; and
- (j) any other matter which is to be or may be prescribed.

124. *Driving vehicle exceeding permissible weight.* — Whoever drives a motor vehicle or causes or allows a motor vehicle to be driven in contravention of the provisions of ⁵⁵[Section 72 or of the conditions prescribed under that section, or in contravention of any prohibition or restriction imposed under Section 72 or Section 74 shall be punishable] for a first offence with fine which may extend to ⁵⁶[two hundred rupees], and for a second or subsequent offence with fine which may extend to ⁵⁷[one thousand rupees].

⁵⁸THE SIXTH SCHEDULE

[See Section 24 (3) and 29 (2)]

REGISTRATION MARKS

⁵⁹[Omitted]

THE SEVENTH SCHEDULE: — [Maximum Axle Weights Permissible for Transport Vehicle] Rep. by the Motor Vehicles (Amendment) Act, 1956 (100 of 1956), Section 101 (w.e.f. 15.1.1959).

61. Ins. by Act 56 of 1969, S. 50 (w.e.f. 2-3-1970).

62. Ins. by Act 100 of 1956, S. 70 (w.e.f. 16-2-1957).

55. Subs. by Act 56 of 1969, S. 80 and Amendment by Act 27 of 1977, S. 12 (w.e.f. 1-9-1977). Gujarat Act 10 of (1977, Mah. Act 10 of 1972, A.P. Act 2 of 1972, Meghalaya Act 16 of 1972; Raj. Act 10 of 1963; Raj. Act 3 of 1969.

56. Sch. VI omitted by Act 47 of 1978, S 41 (w.e.f. 22-9-1979, vide Noti. No. 540 (E), dated 22-9-1979).

⁵⁷THE EIGHTH SCHEDULE

(See Section 71)

Limits of Speed for Motor Vehicles

Class of vehicle	Maximum speed per hour in kilometres
(1) If all the wheels of the vehicle are fitted with pneumatic tyres and the vehicle is not drawing a trailer —	
(a) if the vehicle is a light motor vehicle ⁵⁷ [* * *]	No limit
⁵⁹ [(aa) if the vehicle is a motor cycle	50
Note :— Endeavour shall be made to enforce the speed limit specified in this sub-item by inserting in the motor cycle such device, like a governor or the like, which would ensure that the motor cycle cannot be ridden at a speed faster than the speed specified in this sub-item.]	
(b) if the vehicle is a medium or heavy passenger motor vehicle	60
(c) if the vehicle is a medium or heavy goods motor vehicle	60
(2) If the vehicle is an articulated vehicle (all the wheels of which are fitted with pneumatic tyres) which is a ⁶⁰ [heavy goods vehicle or heavy passenger motor vehicle]	50
(3) If the vehicle is drawing not more than one trailer (or in the case of artillery equipment, not more than two trailers) and all the wheels of the vehicle and the trailer are fitted with pneumatic tyres :	
(a) if the vehicle is a light motor vehicle and the trailer being two-wheeled has a laden weight not exceeding 800 kgms.	60
(b) if the vehicle is a light motor vehicle and the trailer has more than two wheels or a laden weight exceeding 800 kgms.	50
(c) if the vehicle is a ⁶⁰ [medium goods vehicle or medium passenger motor vehicle]	50
(d) if the vehicle is a ^{60a} [heavy goods vehicle or heavy passenger motor vehicle]	40
(e) if the vehicle is a ^{60a} [heavy goods vehicle or heavy passenger motor vehicle] used by the fire brigade	50
(4) Any case not covered by entry (1), (2) or (3)	30]

MINISTRY OF SHIPPING AND TRANSPORT

(Transport Wing)

NOTIFICATION

New Delhi, the 3rd June, 1981

G.S.R. 378 (E). — Whereas the International Convention on Road Signs and Signals relative to motor traffic was done at Vienna on the eighth day of November, 1968.

And whereas the Central Government is for the time being party to the said Convention:

And whereas it is necessary to make additions and alterations to the signs set forth in the Ninth Schedule to the Motor Vehicles Act, 1939 (4 of 1939), to bring the said signs in conformity with the said Convention:

Now, therefore, in exercise of the powers conferred by sub-section (7) of section 75 of the said Act, the Central Government hereby makes the following amendments to the Ninth Schedule to the said Act, namely :—

In the Ninth Schedule to the said Act.

(a) after the heading "TRAFFIC SIGNS" the following shall be inserted, namely :—

"Explanatory Notes"

Note 1. — In respect of Sign Nos. M 1 to M 35 in Part A, Mandatory Signs, Sign Nos. C 1 to C 37 in Part B, Cautionary Signs, and Sign Nos. E 1 to E 22 in Part C—Informatory Signs, —

(i) Normal Size, wherever specified, is the minimum size of the sign which is intended to be used in rural areas on highways declared to be National highways or State highways under any law for the time being in force in such rural areas;

(ii) the Small Size, wherever specified, is the minimum size of the sign which is intended to be used

(a) on all roads, other than the said National Highways and the State highways, in the rural areas; and

(b) on all roads within the urban areas;

Provided that sign of any appropriate size may be used on bollards or alongside traffic light signals on such roads;

(iii) the colour scheme of these signs shall be as specified therein and the reverse side of all such sign plates shall be painted grey;

⁵⁷. Subs. by Act 56 of 1969, S. 81 (w.e.f. 2-3-1970).

⁵⁸. Omitted by Act 27 of 1977, S. 23 (w.e.f. 1-9-1977).

⁵⁹. Ins. by Act 27 of 1977, S. 13 (w.e.f. 1-9-1977).

⁶⁰. Subs. by Act 47 of 1978, S. 42 (w.e.f. 16-1-1979).

^{60a}. Subs. by Act 47 of 1978, S. 42 (w.e.f. 16-1-1979).

- (iv) the posts of all these signs shall be painted in 25 cms. wide bands alternatively black and white and the lowest band next to the ground shall be black;
- (v) the definition plate, whenever specified with a sign or where required to make the meaning of a sign more explicit shall have white background, black letters and black border 20 mm. wide and shall be of adequate size for legibility but not too large as to be obtrusive.

Note 2. — The numerical figures mentioned in the Sign Nos. M 21, M 22, M 23, M 24, M 25 and M 26 in part A. — Mandatory Signs are merely by way of an example. The actual figures shall be as prescribed in each case.

Note 3. — As far as may be practicable, no two or more signs of different types conveying the same information, guidance or direction shall be placed or erected together at any particular location in any public place.

Note 4. — On and from the first day of June, 1985,—

- (a) the Sign Nos. 1 to 8 in Part A. — Mandatory Signs :
- (b) the sign relating to the General Design and the Sign Nos. 1 to 13 in Part B. — Cautionary Signs; and
- (c) the Sign Nos. 1 to 4 in Part C. — Informatory Signs, shall not be placed or erected in any public place, and on and from such date the provisions of this Schedule shall have effect as if the signs mentioned in this note and the paragraph occurring immediately after the heading "Part B. — Cautionary Signs" had been omitted from this Schedule, except as respects things done or omitted to be done."
- (b) In Part A — Mandatory Signs, after the Mandatory Sign No. 8, the Mandatory Sign Nos. M 1 to M 35 specified in Schedule I to this notification shall be inserted;
- (c) in Part B — Cautionary Signs, after the Cautionary Sign No. 13, the Cautionary Sign Nos. C1 to C37 specified in Schedule II to this notification shall be inserted;
- (d) In Part C. — Informatory Signs, after the informatory Sign No. 4, the Informatory Sign Nos. E1 to E22 specified in Schedule III to this notification shall be inserted.

[File No. 14-T (1)/71-Vol. III]

YASHWANT SINHA, Joint Secy.

For Signs See IRC : 67-1977 Code of Public for Road Signs

THE TENTH SCHEDULE

[See Sections 77 and 78]

Driving Regulations

1. The driver of a motor vehicle shall drive the vehicle as close to the left hand side of the road as may be expedient, and shall allow all traffic which is proceeding in the opposite direction to pass him on his right hand side.
2. Except as provided in Regulation 3, the driver of a motor vehicle shall pass to the right of all traffic proceeding in the same direction as himself.
3. The driver of a motor vehicle may pass to the left of a vehicle the driver of which having indicated an intention to turn to the right has drawn to the centre of the road and may pass a tram-car or other vehicle running on fixed rails, whether travelling in the same direction as himself or otherwise, on either side;

Provided that in no case shall he pass a tram-car at a time or in a manner likely to cause danger or inconvenience to other users of the road or pass on the left hand side a tram-car, which, when in motion, would be travelling in the same direction as himself, while the tram-car is at rest for the purpose of setting down or taking up passengers.

4. The driver of a motor vehicle shall not pass a vehicle travelling in the same direction as himself —
 - (a) if his passing is likely to cause inconvenience or danger to other traffic proceeding in any direction, or
 - (b) where a point or corner or a hill or an obstruction of any kind renders the road ahead not clearly visible.
5. The driver of a motor vehicle shall not, when being overtaken or being passed by another vehicle, increase speed or do anything in any way to prevent the other vehicle from passing him.
6. The driver of a motor vehicle shall slow down when approaching a road intersection, a road junction or a road corner, and shall not enter any such intersection or junction until he has become aware that he may do so without endangering the safety of persons thereon.
7. The driver of a motor vehicle shall, on entering a road intersection, if the road entered is a main road designated as such, give way to the vehicles proceeding along that road, and in any other case give way to all traffic approaching the intersection on his right hand.
8. The driver of a motor vehicle shall, when passing or meeting a procession of a body of troops or police on the march or when passing workmen engaged on road repair, drive at a speed not greater than ^(a)[25 km.] an hour.

9. The driver of a motor vehicle shall —

- (a) when turning to the left, drive as close as may be to the left hand side of the road from which he is making the turn and of the road which he is entering;
- (b) when turning to the right, draw as near as may be to the centre of the road along which he is travelling and cause the vehicle to move in such a manner that —
 - (i) as far as may be practicable it passes beyond, and so as to leave on the driver's right hand, a point formed by the intersection of the centre lines of the intersecting roads; and
 - (ii) it arrives as near as may be at the left hand side of the road which the driver is entering.

THE ELEVENTH SCHEDULE

[See Section 79]

Signals

1. When about to turn to the right or to drive to the right hand side of the road in order to pass another vehicle or for any other purpose, a driver shall extend his right arm in a horizontal position outside of and to the right of his vehicle with the palm of the hand turned to the front.
2. When about to turn to the left or to drive to the left hand side of the road, a driver shall extend his right arm and rotate in an anticlockwise direction.
3. When about to slow down, a driver shall extend his right arm with the palm downward and to the right of the vehicle and shall move the arm so extended up and down several times in such a manner that the signal can be seen by the driver of any vehicle which may be behind him.
4. When about to stop, a driver shall raise his right forearm vertically outside of and to the right of the vehicle, palm to the front.
5. When a driver wishes to indicate to the driver of a vehicle behind him that he desires that driver to overtake him, he shall extend his right arm and hand horizontally outside of and to the right of the vehicle and shall swing the arm backwards and forwards in a semi-circular motion.

6082.

(TO BE PUBLISHED IN AN EXTRA-ORDINARY ISSUE OF THE GAZETTE OF INDIA PART II,
SECTION 3, SUB-SECTION (ii))

Dated the 25th September, 1982

NOTIFICATION

S.O. 690 (E) In exercise of the powers conferred by sub-section (1) of section (36) of the Motor Vehicles Act, 1939, as amended by clause (a) of section 7 of the Motor Vehicles (Amendment) Act, 1982, and in supersession of all orders and notifications issued by the State Governments and the Union Territory Administrations in this regard prior to the date of publication of this notification, the Central Government hereby specifies that in relation to the transport vehicles of all makes and models, the maximum safe laden weight of motor vehicles and maximum safe laden weight of each axle of such vehicle shall be as follows, namely :—

- (1) (a) The maximum safe laden weight and the maximum safe axle weight of each axle in relation to each make and model of a transport vehicle manufactured upto 31.3.83 shall be 125% of the rating given by manufacturers in respect of maximum safe laden weight and maximum axle weight of each axle.
- (b) The maximum safe laden weight and the maximum safe axle weight of each axle in relation to each make and model of a transport vehicle manufactured on or after 1.4.83 shall be as per the rating of the maximum safe laden weight and maximum axle weight of each axle fixed by the manufacturer.
- (2) The maximum safe axle weight determined in para (1) shall be further restricted to the maximum safe axle weight given in the Schedule.
- (3) The maximum safe laden weight in respect of all transport vehicles including multi-axled vehicles shall not be more than the sum total of all the maximum safe axle weights put together.
- (4) The fixation of safe laden weights as per the principles enunciated in clauses (1) to (3) above are for the purposes of registration of a transport vehicle including multi-axled vehicle but shall not authorise the carriage of loading exceeding the laden weights restricted or prohibited by a State Government under a notification issued as per the provision of section 74 of the Motor Vehicles Act, 1939 relating to imposition

of prohibition or restriction in the interests of public safety or convenience, or because of the nature of any road or bridge in the concerned State.

SCHEDULE

The maximum safe axle weight shall be as follows :—

	Tonnes
Single axle (single wheel) fitted with 1 Tyre	... 3.0
Single axle fitted with 2 tyres	... 6.0
Single axle fitted with 4 tyres	... 10.2
Tandem axle fitted with 8 tyres	... 18.0

608.3.

(TO BE PUBLISHED IN THE EXTRA-ORDINARY ISSUE OF THE GAZETTE OF INDIA, PART II, SECTION 3, SUB-SECTION (ii))

Dated the 10th, December, 1982

NOTIFICATION

G.S.R. 846 (E) Whereas the draft rules in exercise of the powers conferred by sub-section (1) of section 69 (B) of the Motor Vehicles Act, 1939 (4 of 1939) were published as required by sub-section (1) of section 133 of the said Act in the Gazette of India Part II Section 3, sub-section (ii) dated 1st October, 1982, under notification of the Govt. of India in the Ministry of Shipping and Transport (Transport Wing) TW/TGM (26)/82 (S.O.No. 706 (E) dated 1st October, 1982, inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of a period of 30 days from the date of Publication of the said notification in the official Gazette.

And whereas the said Gazette was made available to the public on the 1st day of October, 1982.

And whereas objections or suggestions received in matter have been considered.

Now, therefore, in exercise of the powers conferred by section 69 of the Motor Vehicles Act, 1939 (4 of 1939) read with section 22 of the general clauses Act 1897 (x of 1897), the Central Government hereby makes the following rules :

- | | |
|--|---|
| Short Title Extent
and Commencement | 1. (1) These rules may be called overall Dimensions of Transport Vehicles and Tyres Rules, 1982.
(2) They shall come into force on the date of their publication in the Official Gazette. |
| Definition | 2. In these rules, unless there is any thing repugnant in the subject or context —
(i) "Act" means the Motor Vehicles Act, 1939 (4 of 1939).
(ii) The words and expressions used, but not defined in these rules, but defined in Motor Vehicles Act, 1939, shall have the meanings assigned to them in that Act. |
| | 3. Overall width of motor vehicles
(1) The overall width of every motor vehicle measured at right angles to the axis of the motor vehicle between perpendicular planes enclosing the extreme points shall not exceed,—
(i) in the case of any motor vehicle excluding a public service vehicle or a transport vehicle but including a motor cab, 2.2 metres;
(ii) in the case of a public service vehicle or a transport vehicle other than a motor cab, 2.5 metres. |

Provided that in the case of a tractor not used for towing trailers carrying goods or passengers the overall width may extend to 2.7 metres :

Provided further that if the State Government is satisfied that a particular vehicle or class of vehicles having overall width in excess of the width specified in this sub-rule is found suitable for carrying out any work of public purpose, the State Government may, by notification in the official gazette, exempt from the provisions of this rule such a vehicle or class of vehicles either generally or in such area or areas on such route or routes

and subject to such conditions, if any, as may be specified in the notification.

Explanation :— For the purpose of this rule, a driving mirror or a direction indicator, when in operation, shall not be taken into consideration in measuring the overall width of a motor vehicle.

(2) Notwithstanding anything in sub-rule (1),—

- (a) the Chairman, State Transport Authority may authorise the use of a motor vehicle other than a transport vehicle but including a motor cab with overall width upto 2.5 metres;
- (b) The Regional Transport Authority or the State Transport Authority, as the case may be, or the Chairman of that authority, if authorised in this behalf by that authority, may authorise the use of transport vehicles having an overall width exceeding 2.5 metres but not exceeding 2.7 metres on a specified route or routes or in a specified area within the State;
- (c) Where a transport authority takes action under this sub-rule, it shall enter in the certificates of registration of the vehicle particulars of the route or routes on which or the area in which the vehicle may be used.

4. Overall length of motor vehicles :

(1) The overall length of every motor vehicle other than a trailer shall not exceed, —

- (i) in the case of any motor vehicle other than a transport vehicle or a public service vehicle, having not more than 2 axles, 9.5 metres;
- (ii) in the case of a transport vehicle or a public service vehicle, having two or more axles, 11 metres;
- (iii) in the case of an articulated vehicle having more than two axles, 16 metres ;
- (iv) in the case of truck-trailer combinations, 18 metres.

Provided that in such areas or on such routes as the State Government may specify in this behalf, an overall length of a public service vehicle may exceed 11 metres but shall not exceed 12 metres :

Provided further that if the State Government is satisfied that a particular vehicle or class of vehicles having overall length in excess of the length specified in this sub-rule is found suitable for carrying out any work of public purpose, the State Government may, by notification in the official gazette, exempt from the provisions of this sub-rule such vehicle or class of vehicles either generally or in such area or areas or on such route or routes and subject to such conditions, if any as may be specified in the notification;

Provided also that the Regional Transport Authority or the State Transport Authority, or its Chairman, if authorised in this behalf by the Regional Transport Authority or State Transport Authority as the case may be may authorise the use of a transport vehicle other than the articulated vehicle having an overall length exceeding 11 metres but not exceeding 16 metres on a specified route or routes, or in a specified area within the State. Where a Transport Authority takes action accordingly, it shall enter in the certificate of registration of the vehicle the route or routes on which or the area in which the vehicle may be used.

(2) In the case of an articulated vehicle or a tractor trailer combination specially constructed and used for the conveyance of indivisible loads of exceptional length,—

- (i) if all the wheels of the vehicle are not fitted with pneumatic tyres, or
- (ii) if all the wheels of the vehicle are not fitted with pneumatic tyres so long as the vehicle is not driven at a speed exceeding twentyfive kilometres per hour the overall length may extend upto 18 metres.

Explanation :— In this rule “overall length” means the length of the vehicle measured between parallel planes passing through the extreme projection points of the vehicle exclusive of—

- (i) any starting handle;

- (ii) any hood when down;
- (iii) any ladder forming part of turn table fire-escape fixed to a vehicle;
- (iv) any post office letter box the length of which measured parallel to the axis of the vehicle does not exceed 30.5 centimetres;
- (v) any ladder used for loading or unloading from the roof of the vehicle, or any tail or indicator lamp or number plate fixed to a vehicle;
- (vi) any spare wheel or spare wheel bracket or bumper fitted to a vehicle;
- (vii) any towing hook or other fitment which does not project beyond any fitment covered by clauses (iii) to (vi) of this sub-rule.

5. *Overall height of motor vehicles :*

- (1) The overall height of a motor vehicle other than a double-decked motor vehicle measured from the surface on which the motor vehicle rests shall not exceed 3.8 metres.
- (2) The overall height of a double-decked motor vehicle shall not exceed 4.75 metres;
- (3) The overall height of the laden trailer when carrying ISO series I Freight Container shall not exceed 4.2 metres.
- (4) This rule shall not apply to fire-escapes town-wagons and other special purpose vehicles exempted by the general or special order of the registering authority.

6. *Overhang of motor vehicles :*

- (1) The overhang of a tractor shall not exceed 1.85 metres.
- (2) The overhang of a motor vehicle other than a tractor shall not exceed sixty per cent of the distance between the plane perpendicular to the axis of the motor vehicle which passes through the centre or centres of the front wheel or wheels and the foremost vertical plane from which the overhang is to be measured as defined in sub-rule (3) :

Provided that the State Government may exempt from the provisions of sub-rule any motor vehicle or class of motor vehicles in such area or areas or on such route or routes and subject to such conditions, if any, as may be specified in the order, if it is satisfied that such vehicle or class of vehicles having an overhang in excess of that specified in this sub-rule can be used in a public place without any danger to public safety.

- (3) For the purposes of this rule, "overhang" means the distance measured horizontally and parallel to the longitudinal axis of the vehicle between two vertical planes at right angles to such axis passing through the two points specified in paragraphs I and II of this definition, respectively.

I. The rear most point of the vehicle exclusive of—

- (i) any hood when down;
- (ii) any post office letter-box, the length of which measured parallel to the longitudinal axis of the vehicle, does not exceed thirty centimetres;
- (iii) any ladder forming part of a turn-table fire-escape fixed to a vehicle;
- (iv) any ladder used when the vehicle is at rest for loading or unloading from the roof of the vehicle, or any tail lamp or number plate fixed to a vehicle;
- (v) any spare wheel or spare wheel bracket fitted to a vehicle;
- (vi) any luggage carrier fitted to a motor vehicle constructed solely for carriage of passengers and their effects and adapted to carry not more than seven passengers exclusive of the driver;
- (vii) any towing hook or other fitment which does not project beyond any fitment mentioned in clauses (ii) to (vi) above;

Provided that, in the case of a stage carriage —

- (a) the projection of any bumper or advertisement panel fitted at the rear of the vehicle shall not exceed 15 centimetres; and
- (b) the projection in respect of an advertisement panel shall not be such as to obstruct either the vision from the rear view mirror or project through the emergency exit at the rear or both.

- II. (i) In the case of a motor vehicle having only two axles, one of which is not a steering axle, the centre point of that axle, or
- (ii) In the case of a motor vehicle having only three axles where the front axle is the only steering axle, a point 102 millimetres in rear of the centre of a straight line joining the centre points of the rear and middle axle, or
- (iii) In any other case a point situated on the longitudinal axis of the vehicle and such that a line drawn from it at right angles to that axis will pass through the centre of the minimum turning circle of the vehicle.
- (iv) In the case of any motor vehicle registered in India before the first day of April 1940, it shall suffice if the overhang does not exceed 7/24th of the overall length of the vehicle.
- (v) In case of a motor vehicle having only three axles where two front axles are steering axles, the centre point of rearmost axle.
- (vi) In case of a motor vehicle having four axles where two front axles are steering axles, a point 102 mm in rear of the centre of a straight line joining the centre points of the rear-most two axles.

7. *Overhang of stage Carriages* : In the case of vehicle used as a stage carriage, no part of the vehicle other than a direction indicator, when in operation, or a driving mirror shall project laterally more than 355 millimetres beyond the centre line of the rear wheels in the case of single rear wheels or more than 152 millimetres beyond the extreme outer edge of the outer tyres in the case of dual rear wheels.
8. *Turning Circle* : Every motor vehicle shall be so constructed as to be capable of turning in either direction in a minimum turning circle not exceeding 24.4 metres in diameter. For the purposes of this rule, such diameter shall be determined by reference to extreme outer edge of the wheel track at ground level.
9. The rules regarding size and nature of tyres will be notified separately.

608.4

(TO BE PUBLISHED IN THE EXTRA-ORDINARY ISSUE OF THE GAZETTE OF INDIA, PART II, SECTION 3, SUB-SECTION (ii))

GOVERNMENT OF INDIA
MINISTRY OF SHIPPING AND TRANSPORT
(TRANSPORT WING)

New Delhi, the 15th April, 1983

NOTIFICATION

G.S.R. 295 (E) Whereas the draft rules in exercise of the powers conferred by sub-section (1) of section 69 (B) of the Motor Vehicles Act, 1939 (4 of 1939) were published as required by sub-section (1) of section 133 of the said Act in the Gazette of India Part II Section 3, sub-section (ii) dated 1st October, 1982, under notification of the Govt. of India in the Ministry of Shipping and Transport (Transport Wing) TW/TGM (26)/82 [S.O. No. 706 (E) dated 1st October, 1982] inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of a period of 30 days from the date of publication of the said notification in the official Gazette.

And whereas the said Gazette was made available to the public on the 1st day of October, 1982.

And whereas objections or suggestions received in the matter have been considered.

Now, therefore, in exercise of the powers conferred by section 69B of the Motor Vehicles Act, 1939 (4 of 1939) read with section 22 of the General Clauses Act 1897 (X of 1897), the Central Government hereby makes the following Tyre Rules in pursuance of para (9) of the "Overall Dimensions of Transport Vehicles and Tyres Rules, 1982" as notified vide GSR No. 846-E dated 10th December, 1982. They shall come into force with effect from 1.4.83.

2. *Definition*

In these rules, unless there is anything repugnant in the subject or context :—

- (i) "Act" means the Motor Vehicles Act, 1939 (4 of 1939).
- (ii) The words and expressions used, but not defined in these rules, but defined in Motor Vehicles Act, 1939, shall have the meanings assigned to them in that Act.

3. *Size and nature of Tyres*

The following size of tyres shall be fitted to a motor vehicle for carrying the maximum weight shown against each size of tyre together with the ply-rating specified by the manufacturer of tyres :

Size of Tyre	Ply-rating specified by the manufacturers	Maximum weight permitted to carry
		Kgs.
6.00 – 20	8	1065
6.50 – 20	8	1240
7.00 – 17	8	1170
7.00 – 20	10	1495
7.50 – 20	10	1750
7.50 – 20	12	1870
8.25 – 20	10	1890
8.25 – 20	12	2115
8.25 – 20	14	2180
9.00 – 20	10	2245
9.00 – 20	12	2540
9.00 – 20	14	2730
9.00 – 20	16	2820
10.00 – 20	14	2955
10.00 – 20	16	3170
10.00 – 24	14	3270
10.50 – 16	12	2540
10.50 – 16	16	2965
11.00 – 20	14	3250
11.00 – 20	16	3595
11.00 – 24	14	3550
12.00 – 20	14	3415
12.00 – 20	16	3655
12.00 – 20	18	4065
14.00 – 20	18	4950
14.00 – 20	20	5140
14.00 – 20	22	6240
LIGHT TRUCK TYRES (DIAGONAL)		
6.00 – 16	6	715
6.00 – 16	8	840
6.50 – 16	6	805
6.50 – 16	8	945
6.70 – 15	8	905
7.00 – 15	6	865
7.00 – 15	8	1020
7.00 – 15	10	1155
7.00 – 16	6	895
7.00 – 16	8	1065
7.00 – 16	10	1200
7.50 – 16	8	1215
7.50 – 16	10	1380
7.50 – 16	12	1550
MOTOR-SCOOTER TYRES		
3.50 – 8	4	215
3.50 – 10	4	245

608/16

MOTOR CYCLE TYRES

2.57 - 19	—	175
3.00 - 18	—	200
3.00 - 19	—	215
3.25 - 16	—	225
3.25 - 18	—	245
3.25 - 19	—	265
3.50 - 18	—	275
3.50 - 19	—	290

AGRICULTURE STEERING WHEEL TRACTOR TYRES (DIAGONAL PLY)

4.00 - 19	4	445
5.50 - 16	4	530
5.50 - 16	6	655
6.00 - 16	4	565
6.00 - 16	6	700
6.00 - 19	4	640
6.00 - 19	6	800
6.50 - 16	4	640
6.50 - 16	6	770
6.50 - 20	4	750
6.50 - 20	6	905

AGRICULTURE DRIVE WHEEL TRACTOR TYRES (DIAGONAL PLY)

8.3/8 - 24	4	780
8.3/8 - 24	6	1015
8.3/8 - 32	4	895
8.3/8 - 32	6	1150
11.2/10 - 28	4	1125
11.2/10 - 28	6	1395
11.2/10 - 28	8	1630
12.4/11 - 24	4	1180
12.4/11 - 24	6	1500
12.4/11 - 28	4	1255
12.4/11 - 28	6	1559
12.4/11 - 28	8	1890
12.4/11 - 36	4	1420
12.4/11 - 36	6	1800
12.4/11 - 38	4	1455
12.4/11 - 38	6	1850
13.6/12 - 28	4	1375
13.6/12 - 28	6	1790
13.6/12 - 28	8	2055
13.6/12 - 38	6	2075
13.6/12 - 38	8	2390
16.9/14 - 28	6	2300
16.9/14 - 28	8	2720
16.9/14 - 30	6	2375
16.9/14 - 30	8	2805
18.4/15 - 30	10	3520
18.4/15 - 30	12	3975
18.4/15 - 30	14	4255

4. Every transport vehicle shall be fitted with tyres which are in good condition and which have not become bald or whose canvas has become visible because of wear and tear.

5. *Solid Tyres*

(i) The tyre of each wheel of a vehicle fitted with solid tyres shall be smooth and shall, where the tyre touches the surface of the road or other base, whereon the vehicle moves or rests, be flat:

Provided that the edges of the tyre may be as rounded to the extent in the case of each edge of not more than 12.5 millimetres :

Provided further that if the tyre is constructed of separate plates, the plates may be separated by parallel spaces, which shall be disposed throughout the outer surface of the tyres, so that nowhere shall be aggregate extent of the space or spaces in the course of a straight line drawn horizontally across the circumference of the wheel exceed one-eighth part of the width of the tyre.

(ii) The width of a solid tyre shall not be less than 76 millimetres in the case of a wheel fitted to a trailer and 127 millimetres in any other case.

(iii) In the case of vehicles fitted with worn solid rubber tyre, the thickness shall be uniform and not less than shown below :—

<i>Tyre Width</i>	<i>Minimum uniform thickness</i>
127 millimetres	22 millimetres
127 millimetres — 203 millimetres	25.4 millimetres
203 millimetres and upwards	28.5 millimetres

Provided two tyres are fitted to a rim the width for the purposes of this rule shall be the combined width of the two-tyres.

6. *Size of wheels*

The diameter of any wheel fitted by a vehicle with solid tyres shall not be less than 60 centimetres.

(G.J. MISRA)
Joint Secretary to the Govt. of India
F. No. TW/TGM (26)/82

608.5

No. PL-30 (106)/82

Dated the 12th May, 1983

To

The CEs, PWD, of all States/UTs dealing with Roads

Subject : Assignment of RLW/SAW of transport vehicles — reference to Central Government and rating of existing weak bridges

The attention of the State Government is drawn to the recent amendments to the Motor Vehicles Act, 1939 and the Government of India Notification dated 25.9.1982 specifying the maximum safe laden weight and safe axle weight of motor vehicles.

2. The above notification has the effect of superseding all the notifications issued by the State Govts. in respect of fixation of RLW/SAW. (Registered Laden Weight/Safe Axle Weight).

3. For the purpose of easy comprehension and to serve as a guide, the maximum safe laden weights of typical transport vehicles are given in Appendix 1 to this letter.

4. The State Transport authorities responsible for registering the vehicles would no doubt be required to follow the instructions given in the notification. However, it would be necessary that the State Govts./UTs take action as per the provisions of section 74 of the Motor Vehicles Act for the purpose of restricting the weight that may be carried in any specified areas or on any specified roads in the interest of public safety and convenience or because of the nature of any road or bridge. For this, suitable notifications shall be required to be issued by the State Govts./UTAs wherever required. It may also be added that necessary traffic signs indicating the prohibitions or restrictions near such places should also be put up for the information of all concerned. For assisting the State Govt. in the issuance of such notifications, it would be essential that the State departments dealing with roads immediately undertake the task of determining the rating of existing bridges and culverts and having the same notified through the State Transport Authorities. For the purpose of rating the bridges and culverts, guidance can be taken from the Indian Roads Congress, Special Publication No. 9 : Report on Rating of Bridges. Suitable steps may also be taken to identify specific roads, if any, as are not at all capable of carrying the single axle loads of 10.2 tonnes and arrange for their suitable strengthening programme being undertaken to meet the needs of traffic.

5. For the movement of heavy consignments both in terms of size and weight, special relaxations over those indicated in the Central Govt. notification No. 690 E dated 25.9.82 and No. 846 E dated 10.12.82 are involved. While the State Govts. have been empowered to grant relaxation in respect of dimensions of vehicles under specific circumstances, references have to be made to the Central Govt. for relaxation in respect of loads higher than the prescribed loads on specific routes. For dealing with such references in the

Central Govt., apart from other details, the recommendation of the concerned State Govt. is required for relaxation along with detailed drawings/design of the vehicle, a certificate of the State PWD regarding worthiness of the concerned roads, bridges and culverts etc. In this context a circular has already been addressed by the Ministry to the State Transport Secretaries/Transport Commissioners of all State Govts./UTAs with copy to State PWD Secretaries. A copy of the same (Appendix 2) is also enclosed for information and necessary action by the State CEs.

6. For major industrial and power projects, it is desirable to make arrangements for the movement of heavy consignments which may *inter alia* involve certain weak bridges and culverts on specific routes. Such requirements should be identified well in advance and suitable action taken by the State Govts. in respect of State roads, for undertaking necessary measures for replacement or strengthening of existing weak bridges and culverts.

7. As regards bridges on NHs which require urgent attention for such purposes, reference may be made to this Ministry for arranging further action.

8. The State Govts. may please indicate the steps being taken/proposed to be taken by them for assessing the laden weight of any vehicle using any road at any instant of time.

9. The receipt of this letter may please be acknowledged.

10. It is also requested that the contents of this letter may be brought to the notice of all departments dealing with roads.

Appendix I

MAXIMUM SAFE LADEN WEIGHTS OF TYPICAL TRANSPORT VEHICLES

Transport Vehicles		Maximum Safe Laden Weight	Maximum Safe Axle Weight
(1)		(2)	(3)
		Tonnes	Tonnes
A. RIGID VEHICLES			
(i)	One Axle	9.0	3 tonnes front tyre
(ii)	Two-axle		6 tonnes rear axle
(a)	Both axles single tyres	12.0	6 tonnes front axle 6 tonnes rear axle
(b)	Front axle single tyre and rear axle dual tyres	16.2	6 tonnes front axle 10.2 tonnes rear axle
(iii)	Three-axle	24.0	6 tonnes front axle 18 tonnes rear tandem axle
B. SEMI-ARTICULATED VEHICLES			
(i)	Two axle tractor and Single axle trailer	26.4	Tractor 6 tonnes front axle 10.2 tonnes rear axle Trailer 10.2 tonnes rear axle
(ii)	Two axle tractor and Tandem axle trailer	34.2	Tractor 6 tonnes front axle 10.2 tonnes rear axle Trailer 18 tonnes rear tandem axle.
(iii)	Three axle tractor and single axle trailer	34.2	Tractor 6 tonnes front axle 18 tonnes rear tandem axle Trailer 10.2 tonnes rear axle
(iv)	Three axle tractor and tandem axle trailer	42.0	Tractor 6 tonnes front axle 18 tonnes rear tandem axle Trailer 18 tonnes rear tandem axle

C. TRUCK-TRAILER COMBINATIONS

(i) Two-axle truck and two axle trailer	36.6	<i>Truck</i>
		6 tonnes front axle
		10.2 tonnes rear axle
		<i>Trailer</i>
(ii) Three axle truck and two axle trailer	44.4	10.2 tonnes front axle
		10.2 tonnes rear axle
		<i>Truck</i>
		6 tonnes front axle
(iii) Two axle truck and three axle trailer	44.4	18 tonnes rear tandem axle
		<i>Trailer</i>
		10.2 tonnes front axle
		10.2 tonnes rear axle.
(iv) Three axle truck and three axle trailer	52.2	<i>Truck</i>
		6 tonnes front axle
		10.2 tonnes rear axle
		<i>Trailer</i>
		10.2 tonnes front axle
		18 tonnes rear axle
		<i>Truck</i>
		6 tonnes front axle
		18 tonnes rear tandem axle
		<i>Trailer</i>
		10.2 tonnes front axle
		18 tonnes rear tandem axle

Appendix 2

No. TW/TGM-11/83

Dated the 30th March, 1983

To

The Transport Secretaries/Transport Commissioners of all State Govts./U.Ts.

Subject : References to Central Govt. for approval under Section 36 (1) of the Motor Vehicles Act (1939)

Consequent upon amendment of the Motor Vehicles Act, 1939 by which the powers to assign RLW/SAW have been vested in the Central Government, a large number of cases are being referred to this Ministry by the State Governments seeking relaxation even when they fall within the prescribed weight/dimensions limits automatically qualifying for assigning of RLW/SAW by the State Transport Authorities in the registration certificate.

2. In this connection, it is clarified that by virtue of the powers vested in the Central Government to assign RLW/SAW as per latest amendment of the Motor Vehicles Act, 1939, the Central Government has issued Notification No. 690 E dated 25.9.1982 which prescribe the ceilings of permissible RLW/SAW for different types of transport vehicles. The State Transport Authorities are empowered under Section 24 of the Act to assign RLW/SAW. While granting registration, what has to be ensured is that the RLW/SAW are within the ceilings prescribed in the Notification No. 690 E dated 25.9.82.

3. Similarly, overall dimensions of the vehicles have also been prescribed as per "Overall Dimensions of Transport Vehicles and Tyres Rules, 1982", in the Notification No. 846 E dated 10.12.82. Here also the provisions empower State Governments to grant relaxations in respect of length, width etc. under specific circumstances.

4. Reference to the Central Government, therefore, would be necessary when the relaxation is required in respect of particular vehicle specifically in favour of the operator when that vehicle has to carry loads higher than prescribed load on specific routes. Here also it is to be on the recommendation of the concerned State Govt. who after due examination would recommend relaxation and forward the same along with detailed drawings/design of the vehicle, a certificate of the State PWD regarding worthiness of the concerned roads/bridges/culverts, etc. Thus in this way, the proposals in respect of vehicles articulated or semi-articulated along with prime-mover, involving individual axle loads over and above the weight specified in this Ministry's notification dated 25.9.1982 will continue to be referred to the Government of India. The cases falling within the ceilings prescribed in Notification Numbers 690-E and 846-E as referred to above need not be referred.

D.O. No. RW/PL-30 (106)/82

Dated the 17th May, 1983

To

All the Secretaries and Chief Engineers of the State PWDs (By name)

Subject : Assignment of SAW/RLW of Transport vehicles — Reference to Central Govt. Rating of bridges

I would like to draw your kind attention to this Ministry's letter of even number dated 12.5.83 on the subject noted above. While you will be taking immediate action for arranging the task of determining the rating of existing bridges and culverts and having the same notified through the State Transport authorities, I take this opportunity to bring to you kind notice two unfortunate incidents where unduly heavy transport vehicles were plying resulting in collapse of bridges over the river Lingra on NH 42 in Orissa and over river Damodar on NH 33 in Bihar. This has caused heavy national loss and inconvenience to the heavy traffic using these two National Highways as the collapsed bridges will take time for their replacement and the traffic has, in the meantime, to be either re-routed or subjected to inconvenience.

2. I shall be grateful if the State Governments/UTs. kindly take all preventive steps to avoid such instances and ensure with the State Transport authorities that the enforcement regarding the load restriction on any bridge, if any, as reported by the State PWD authorities is more strict and damages to the existing weak bridges on the NHs are avoided. We shall be thankful to know the steps being taken by you in this matter.

609 TRAFFIC CELLS

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
609.1.	PL-50(19)/73-SP dt. 24.6.74	Need for Traffic Engineering Cells in the State P.W.D.s	609/1
609.2. <u>170</u>	OR/Misc/35/77 dt. 20.12.77	Traffic Engineering Cells in the State P.W.Ds	See Code No. 170
609.3.	OR/Misc/35/77 dt. 5.6.79	Need for Traffic Engineering Cells in the State P.W.Ds. etc.	609/2
609.4.	RW/OR/Misc/35/77 dt. 1.2.85	—do—	609/2

No.PL-50(19)/73-SP

Dated the 24th June, 1974

To

The All State Governments and Administrations of U.Ts (Departments dealing with Roads)

Subject: Need for Traffic Engineering Cells in the State P.W.Ds.

I am directed to say that, as the State Government are aware, there has been a phenomenal growth in road traffic in recent years, with the result that the problems of congestion delay and accidents on roads have worsened. The need and urgency of taking suitable measures to tackle these problems have been voiced from time to time both in the Parliament and by the Press. The Traffic Engineering Committee of the Indian Roads Congress has *inter alia* recommended that **Traffic Engineering Cells** needed to be set up in Public Works Department of the State Governments to help solve problems demanding the applications of traffic engineering techniques. The recommendations of the said committee regarding the functions and set up of traffic cells in the State P.W.Ds are as under :-

(a) Functions :

- (1) To collect and compile statistical data relating to the problems of driver, vehicle and roadway and to prepare therefrom reports and recommendations for the attention of implementing authority. Studies of nature and volume of traffic, its origin and destination, and the extent of losses due to congestion and accidents, factors affecting speed, safety and convenience in the use of roadway facilities, and evaluation of the effect of provision of various road facilities. In other words, all types of studies related to highway transportation operational matters.
- (2) To analyse data regarding the causes of traffic accidents and prepare recommendations for improvements - both operational and engineering analysis of accident records together with data as to the volume of traffic, speeds etc., thereby suggesting remedies for specific locations as well as providing model for dealing with similar situations elsewhere.
- (3) To supervise directly the design, fabrication or purchase and installation of all traffic control devices on highways under the control of the state P.W.Ds, sign signals and pavement markings etc.
- (4) To make special study of speed zoning, establishment of no-passing zones and proper pavement use.
- (5) To co-operate with enforcement officials in the establishment of necessary traffic regulatory measures.
- (6) To advise and assist Municipalities/Corporations lacking traffic engineering departments of their own on local traffic problems, as, for example, traffic signals and their co-ordination, traffic signs, road markings, design of parking facilities, and traffic regulations.
- (7) To co-operate with the design, construction, and maintenance divisions of the State P.W.D. reviewing plans affecting traffic movement.
- (8) To co-operate with units of the P.W.D. concerned with highway planning and operation. Under whatever jurisdictional guidance, highway planning, by its very nature, is a broad staff function which encompasses every wing of the P.W.D. By proper co-ordination adequate plans are to be developed.
- (9) To participate in traffic research for the evolution of more effective traffic control devices and to obtain such other information as may lead to greater safety and efficiency in the use of present or proposed traffic facilities.
- (10) To co-operate with the police, press, radio schools, safety councils, civic groups etc. in the promotion of traffic safety.
- (11) To co-ordinate between the various departments such as telephone, electricity, drainage etc. so that comprehensive plans may be developed for providing these facilities at the proper time rather than each one working at its pleasure and thus necessitating the digging up of the roads time and again.

(b) Set-up of Traffic Cells in State P.W.Ds.

Traffic engineering cells in states should be headed by a Superintending Engineer with his office in the principal city of the State. There should be four Executive Engineers under him, one for transportation planning, another for traffic engineering, the third for research and standards and the fourth for road accidents. These Executive Engineers should be provided with the necessary staff consisting of Assistant Engineers and Research Officers (Economists, Statisticians, Sociologists, Psychologists and lawyers).

The Executive Engineer (Transportation Planning) would be entrusted with the duty of conducting traffic studies, analysis of data and planning of road net-work and also help authorities in small towns and cities in conducting such studies. He will also work for co-ordination of road transport with other modes of transport. The Executive Engineer (Traffic Engineering) would advise other authorities as regards the improvement of work of intersections, road signs, road markings etc., and co-ordinate the work of the various officers working in the State. He will also advise small cities in matters relating to traffic engineering. The Executive Engineer for Research and Standards shall be incharge of the work regarding study and development of traffic control devices, riding quality of pavements, motor vehicle running costs, economic benefits of road construction and improvements. Besides his research activity, he will work out standards. The fourth Executive Engineer i.e. for accidents, will collect statistical data regarding the occurrence and

609/2

causes of accidents and suggest ways and means for reducing their number and severity.

I am to request that the above recommendation of Indian Roads Congress may kindly be considered and action taken intimated to this Ministry.

609.3.

No. OR/MISC/35/77

Dated the 5th June, 1976

To

To The All State Govts. and Administrations of Union Territories (Departments dealing with Roads).

Subject :- Need for Traffic Engineering Cells in the State PWDs etc.

I am directed to invite a reference to this Ministry's letter of even number dated the 28th December, 1977 (copy enclosed) on the subject mentioned above and to say that it has since been decided to agree to the entire expenditure for the establishment of Traffic Engineering Cells being met out of the States Central Road Fund (Allocation) account for a period of five years to begin with. According to this Ministry's assessment, a sum to the extent of Rs 10/15 lakhs will be required for meeting the initial and recurring expenditure for five years as per details enclosed.

2. I am, therefore, to request that the question of setting up of a Traffic Engineering Cell may kindly be re-examined in the light of above decision and suitable proposals for setting up these cells formulated and forwarded to this Ministry at an early date.

Enct. not printed

609.4.

No. RW/OR/MSC/35/77

Dated, the 1st February, 1985

To

All State Governments and Administrations of Union Territories (Departments dealing with Roads)

Subject : Need for Traffic Engineering Cells in the State PWDs

I am directed to refer to this Ministry's letter of even number dated the 5th June, 1979 (copy enclosed*) on the subject noted above in which it was stated that the entire expenditure for establishment of Traffic Engineering Cells in the States/Union Territories would be met from the accruals of the State/Union Territories concerned in Central Road Fund (Allocations) for a period of 5 years to begin with. Some of the States have now approached the Ministry for meeting further expenditure on Traffic Engineering Cells out of accruals in the C.R.F. (Allocations) Account.

2. The matter was examined and it is suggested that States/Union Territories desirous of continuing the Cell may consider the question of financing the Cell from C.R.F. (A) for a further period of 5 years and send suitable proposals to the Ministry. Such proposals would be considered subject to availability of free balance at the credit of the State/Union Territory concerned, in the Central Road Fund (Allocations) Account.

*Reproduced above

701 WAYSIDE AMENITIES

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
701.1.	PL-30(53)/74 dt. 15.7.76	Landscaping & Development of Road-side laybys along NHs-Implementation of the Recommendations of Study Group on Wayside Amenities	701/1
701.2.	N-1/PB/17/76 dt. 10.7.79	Wayside Amenities on NH Construction of Truck Parking Areas Complexes	701/2
701.3.	NHIII/P/37/77 dt. 1.8.79	Construction of pick-up Bus Stops on NHs in Rural (Non-urban) Areas	701/8
701.4.	NHIII/P/16/82 dt. 11.5.82	Provision of Wayside Amenities Along Highways	701/12
701.5.	NHVI-50(9)/83 dt. 11.7.83	—do— Truck Parking Areas	701/12
701.6.	TW/TDC/19/84 dt. 23.11.84	18th Meeting of the Transport Development Council-Implementation of Scheme of Establishment of Truck Parking Complex along Highways	701/13

No. PL-30(53)/74

Dated the 15th July, 1976

To

All State Govts. and Union Territories Administrations (Departments dealing with Road Transport)
All State Chief Engineers and Additional Chief Engineers dealing with National Highways

Subject : Landscaping and development of roadside lay-byes along National Highways — Implementation of the recommendations of the Study Group on Wayside Amenities

The Study Group on Wayside Amenities set up by the Ministry had stressed in its report that highway authorities should beautify the roadside simultaneously with road development. Relevant recommendations of the Study Group in this regard are reproduced below :

***Highway beautification**

- 6.48 The future programme of road development throws a responsibility on the Highway authorities to beautify the roadside landscape simultaneously. This involves development of scenic spots on or near the road, construction of roadside parks, plantation of trees blending with the environment and removal of trees, rocks etc. which obstruct the view. For all these programmes, land should be acquired at the time of land acquisition for the road itself
- 6.49 We think it necessary that landscaping of the roadside and development of laybys, roadside parks etc. should be in architectural harmony with the surroundings. We also think that in the construction of structures for roadside amenities like sign-boards, restaurants etc. the aim of beautification of the highway should be uppermost from the very beginning. In other words, the work of beautification should not be left to a later phase giving the highway a merely cosmetic appearance.
- 7.15 As regards priority between different routes, it is imperative that a comprehensive traffic survey of all the important highways should be undertaken. Apart from that an accurate inventory of all the facilities presently available along these highways should be drawn up. This will help in shifting of services which are concentrated unreasonably at many points and remodelling/improvement of others which do not measure up to the requisite standards at the moment.
2. These recommendations have already been discussed at meeting of Transport Development Council held in November 1973. The report of the Study Group was also forwarded to the State Governments for implementation vide Ministry's letter of even number dated the 20th June 1975 and letter No. 3-T(34)/74 dated the 21st June 1974.
3. Having regard in the above it has been decided that a staged programme of beautification and development of the above mentioned amenities along National Highways should be formulated. For this purpose, the State Govts./ Chief Engineers are requested to have an accurate inventory the present facilities prepared in the proforma enclosed. Inventory information may also be depicted on small scale linear plans of National Highways. In addition the plans should indicate the potential locations where scenic laybys, roadside parks, specially landscape Section etc. could be developed.
4. These surveys will help in remodelling/improvement of amenities which do not measure up to the desired standards at the moment. Based on inventory surveys, the State Governments should fix priorities and formulate a preliminary action programme of beautification giving approximate idea of cost and time schedule of completion along each National Highway Section. These proposals may please be developed associating the Ministry's regional officers and submitted within the next 3-4 months. On approval of the proposals, and their inclusion in the current plan detailed estimates will be called for from the State Government for sanction.
5. As regards landscaping of National Highway sections the proposals may please be formulated with the help of horticulture specialist and landscape architects also associating our Regional officers and the draft action plan sent to the Ministry for acceptance in the same manner as spelt out above.
6. Action taken in the matter may kindly be intimated to us the earliest convenient.

PROFORMA FOR SURVEY OF EXISTING ROADSIDE BEAUTIFICATION FEATURES ALONG NATIONAL HIGHWAYS.

State : _____ District : _____
 National Highway No. _____ Circle _____
 Section : _____ Division _____

Location/ reach (Km)	Type of amenity (give code No.*)	Area covered by (m ²) the amenity	Brief Description	Deficiencies & rough cost of improvement	Remarks
-------------------------	-------------------------------------	--	-------------------	---	---------

- * Code :
1. Roadside Park
 2. Scenic Laybys
 3. Landscaped section
 4. Tree plantings
 5. Others (specify)

701.2.

No. 1/PB/17/76.

Dated the 10th July, 1979

To

The Secretaries to the Govt. of Punjab & Haryana, PWD & Transport Departments, Chandigarh

Subject: Wayside amenities on National Highway construction of Truck Parking Areas Complexes

I am directed to say that with a view to reducing the incidence of accidents on highways, this Ministry has been considering the question of formulation of a scheme for setting up of truck parking complexes along National Highways to provide greater facilities for wayside amenities to truck operators viz. truck drivers, cleaners and other staff employed on trucks. After discussions in various high level meetings including Transport Development Council, Govt. of India has now formulated a scheme as under :

- (i) Truck Parking complexes should be set up on National Highways.
- (ii) The cost of land (i.e. land acquisition, services compound wall paving of internal roads, approach roads & parking area for trucks etc.) in the truck parking complexes will be borne by the Govt. of India in the case of National Highways.
- (iii) A revolving fund may be created to take care of the aspects like the construction and maintenance of buildings and structures required for canteens dormitories, vehicle repair facilities, shops etc. and for running and management of the truck parking complexes on no profit no loss basis. Appropriate fees to be fixed by the Society will be charged from the truckers for enjoying the facilities.
- (iv) The proposed revolving fund will be started by raising contribution from truck operators through their unions or otherwise at the rate of Rs. 100/- per truck to begin with.
- (v) The revolving fund will be operated by a Society with its branch units in the States. The Society at apex level at the Centre will function under the chairmanship of an officer of the Ministry of Shipping & Transport and the branch units of the Society in the States shall function under the chairmanship of Transport Commissioner/Controller of the concerned State.

2. In the light of the above decision, Govt. of India have drawn up a Memorandum of Association and Rules and Regulations of the proposed Truck Operators Highway Amenities Society. A copy of these Rules & Regulations is circulated herewith for your information and guidance.

3. I am further to say that necessary steps to register the Society at New Delhi are being taken and as soon as it is registered the work relating to the Constitution of State Units of the Society will require to be initiated at State level. I am, therefore, to request that the State Govt. may consider the matter and select suitable sites for setting up of these truck parking complexes along National Highways in the State and get in touch with the Secretary General of the All India Motor Transport Congress, 16 Asaf Ali Road, New Delhi, who is the Member Secretary designate of the proposed Society for further action in this regard.

4. In regard to such truck parking complexes along State Highways, the State Govts. may themselves evolve a suitable scheme on similar line for implementation as the expenditure on such complexes on State Roads will be met from State Govt. resources or out of the share of the State Govt. from the Central Road Fund (Allocations account).

REVISED MODEL AGREEMENT FOR TRUCK PARKING COMPLEX

This lease agreement made this _____ day of _____ One thousand nine hundred and _____ between the President of India (hereinafter called the Government which expression shall, unless excluded by or repugnant to the context, include his successors in office and assigns) of the one part and _____ a limited company*/Registered Society* registered under (here give full particulars of company/society). _____

(hereinafter called the lessee) of the other parts for the construction and maintenance of a truck parking area complex with necessary provisions for appurtenant works here enter details of premises i.e. land Revenue etc.) _____

2. Whereas the LESSEE has applied to the LESSOR for permission to construct and maintain on the Government land a truck parking area complex with necessary provision for appurtenant works at _____ particularly described in the Schedule annexed hereto and shown in the drawings attached hereto (hereinafter referred "as the said premises").

3. Terms of the Lease :

i) Purpose : The land is leased solely for the purposes of the construction and maintenance at the LESSEE's cost but in accordance with the designs, plans and specifications including boundary walls, sewers and drains and other conveniences as per the sanctioned building plans to the satisfaction of municipal committee/corporation or any other local body and duly approved by the LESSOR.

ii) That this agreement shall come into force from *date of execution of the agreement _____ and shall remain in force for 20 years upto _____ in the first instance and be terminable by a notice of 6 months by government and the lease may or may not be renewed after the expiry of the said period.

iii) The LESSEE shall not sell, transfer, assign or otherwise part with the possession of the whole and/or part of the complex area.

iv) That the LESSEE shall within twelve months from date of receipt of the permission, but without interfering in any way with the road traffic, complete the construction of rest-places, shops etc. and shall make provision for drainage to the full satisfaction of the Executive Engineer/Divisional Engineer incharge of the National Highway, according to the approved drawings and specifications. The truck Parking Area shall not be brought into use after completion unless the Executive Engineer/Divisional Engineer has given completion certificate after satisfying himself that the entire work has been completed as per the approved drawings and specifications.

v) The Lessee shall commence work within 3 months of the date of signing the agreement.

vi) In the event of the agreement having been signed between the LESSOR and the LESSEE, both the LESSOR and LESSEE will be under obligation to comply with the terms and conditions herein contained in the said lease. Any failure of the LESSEE to perform his part of the obligation after signing the agreement will tantamount to the revocation of the agreement and entitle the LESSOR TO terminate the lease.

4. On the termination of the lease, either on expiry of the term provided therein or for any other reason, the LESSOR shall not be bound to pay any sum whatsoever by way of price compensations or damages to the LESSEE in respect of any work carried out on the land.

5. That within six months of a notice duly given to the LESSEE in this behalf, the LESSEE shall at his/their own cost remove the site structures constructed in connection therewith and restore the land to its original condition, when required to do so by the LESSOR or by any other person duly authorised on his behalf failing which the LESSOR will forfeit the entire assets belonging to the LESSEE and dispose them off in the manner as he thinks fit at the cost of the LESSEE.

6. The lessee shall pay in advance each year a yearly lease fee of Rs. 100/- per annum. Such licence shall be paid free of all deductions every year on the first two days of April. It is expressly agreed and declared that the right of the Government to terminate this Agreement as hereinafter provided shall not be prejudiced by reason of the fact that the licence fee shall be paid every year in advance as aforesaid and that in the event of this Agreement being terminated in the manner hereinafter provided, the Government shall refund to the Lessee pro rata the licence fee which may have been so collected and attributable to the period subsequently to the date of termination.

EXCEPTIONS AND RESERVATIONS ON BEHALF OF THE GOVERNMENT

7. The Government does not lease but hereby excepts and reserves to itself all mines, minerals and quarries, including all substance of mineral nature which may be won from the earth, whether on the surface or below it, with liberty to search for, work and remove the same, in as full and ample a way as if this lease had not been made.

8. The Government does not lease but hereby excepts and reserves to itself out of the land :

- a) All rivers and streams, with their beds or banks;
- b) All water courses and drainage channels; and
- c) All sewers, electric transmission lines, poles and towers telephone and telegraph lines and poles conduits, water mains and storm-water channels.

POWER OF ENTRY

9. For the full discovery, enjoyment, and use of any of the right hereby reserved or stipulated, or for the protection and maintenance of any property hereby excepted, it shall be lawful for the Government through its authorised agents or for any officer of the Government duly authorised in that behalf to enter the land and occupy it temporarily.

10. That the LESSEE shall at his own cost maintain the said Truck Parking Area complex including trees and lawns and ensure the hygienic conditions and cleanliness in and around the parking area to the satisfaction of the LESSOR or any other person authorised by him who may visit the area from time to time for the purpose. The maintenance of road and paved area in the parking place, however, shall be the responsibility of the LESSOR. The LESSEE shall also provide fire fighting equipment and other safeguards against risk of fire required under the Explosives Act.

OBLIGATIONS OF THE LESSEE

11. The Lessee hereby covenants with Government as follows :-

- a) To pay to or on behalf of the Government the rent and any other payments which may become due under the lease at proper time and place and in such manner as may be prescribed by law or by the order of any competent authority.
- (b) Not to use the whole or any part of the land for any purpose other than that referred to in Clause I and not to use it in any way likely to lessen its value or likely to interfere with the existing rights of traffic over the said land.
- (c) Not to do or suffer to be done any act inconsistent with or injurious to any of the rights hereby excepted and reserved to the Government and in particular to permit without let or hindrances all officers or servants of the Government or other persons duly authorised by the Government in this behalf to enter the land at all times and do all acts and things necessary for or incidental thereto.
 - i) The purpose of enforcing compliance with any of the terms of this lease; and
 - ii) Any purpose connected with the full employment, discovery and use of the mineral or other rights herein reserved to the Government, without claim to compensation whether by reduction of rent or otherwise, except as hereinafter specifically provided.
- d) Not to remove any earth from the road land adjoining the land leased or in any other way interfere with the adjoining lands, if any, of the Government.
- e) At the end or earlier termination of the lease to leave the land and surrender it peaceably to the Government and if so required by the Executive Engineer/Divisional Engineer to pull down and remove any structure existing thereon and deliver up the land in a level state and as in its original condition.
- f) To present this lease for registration as soon as may be after its execution at his own cost.
- g) The lessee shall hold the Government indemnified against any claims, loss or damage arising out of the construction or use or operation of any structure or petrol pump erected on the land.
- h) The Lessee shall obtain any or every licence (s) necessary for the sale of petroleum products at the said premises required under any Central/State Government or local enactment for the time being in force and shall faithfully observe and perform all the terms and conditions for such licence (s) and shall promptly renew the same from time to time.
- i) The Lessee shall indemnify and save harmless the Government from all losses, damages, claims, suits and actions which may arise out of or result from any injury to any person or property or from violation of any statutory enactments, rules or regulations or other written orders or other laws or caused by or resulting from non-observance by the Lessee of the provisions of this Agreement. The Lessee shall also keep the Government indemnified against any loss of the site and/or the outfit and/or the structures and fixed assets or any part thereof and all costs and damages incurred by the Government by reason of the breach of any of the provisions of this Agreement.
- j) The Government will at its own cost arrange for all the electrical connection from the Lessees switch board to the outfit. The Lessee shall at his own cost arrange for all other electrical and water connections including those from the mains and shall pay the deposits, if any required to be paid in connection therewith. The Lessee shall promptly pay all bills for electrical, energy and water consumed on the said premises as shown in the bill received by the Lessee in respect thereof.
- k) The Lessee shall during the continuance of this Agreement, adequately insure himself against following risks viz, third party risks, fire and explosion risks, Workmen's compensation and/or loss of or damage to the product for any cause whatsoever with an insurance Company approved by the Government such policy shall in no event be for an amount less than the minimum amount suggested by the Government. The policy of Insurance shall be such as may be approved of by the Government.
- l) On the termination of this Agreement, should there be any money due to the Government, the Lessee undertake to pay the same forth with to the Government.
12. It is mutually agreed between the parties as follow :-
 - a) The Government may at any time determine this demise by giving six month's notice to the Lessee, which notice may either be given to the Lessee, in writing or may be pasted on the land, at the option of the LESSOR.
 - b) If the LESSEE commits any breach or fails to perform any of the terms or conditions of this Lease or suffers or permits such breach or non-performance, the Government may at any time thereafter determine the demise and resume possession of the Land and may pull down any structures existing thereon and sell the materials thereof and retain the proceeds of the sale, whether this right may have been waived in respect of any earlier default or not, and without prejudice to any other right or claim. Provided that the Government shall pay to the lessee the balance of the sum which may be available after deducting all the dues of the lessee including any cost or expenses that may be incurred by the lessee in this respect.

13. If any question or difference whatsoever shall at any time hereafter arise concerning this lease or the construction, meaning, operation, or effect thereof or any clause herein contained or so to the rights, duties or liabilities of either party, under or by virtue of this lease or otherwise or touching the subject matter of this lease or arising out of or in relation thereto then save in so far as the decision of any such matter has been herein before provided for and has been so decided the matter in difference shall be referred to

the arbitration of the Chief Engineer of the State P.W.D. or of the some other officer of the State Government who may be appointed by the Chief Engineer who shall have power to decide any matter so referred.

The Lessee will not be entitled to raise any objection to any such arbitrator on the ground that the arbitrator is an officer of the Government or that he has to deal with the matters to which the contract relates or that in the course of his duties as an officer to the Government he had expressed views on all or any of the matters in dispute or difference. In the event of the arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason the Chief Engineer as aforesaid at the time of such transfer, vacation of office or inability to act, shall designate another person to act as arbitrator in accordance with the terms of the Agreement. Such person shall be entitled to proceed with the reference from the point at which it was left by his predecessor. It is also a term of this contract that no person other than the Chief Engineer or a person nominated by such Chief Engineer of the Government as aforesaid shall act as arbitrator hereunder. The award of the Arbitrator so appointed shall be final, conclusive and binding on all parties, to the Agreement, subject to the provisions of the Arbitration Act, 1940, or any statutory modification on-reenactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

14. The stamp duty and the registration charges on this instrument shall be borne by the Lessee.

In witness whereof the parties have set their hands on the deed hereinafter in each case specified.

THE SCHEDULE above mentioned.

Description and boundaries of the land.

An area of _____ situated in the
Tehsil _____ District _____ Shown in the
revenue records/ records of the local authority as Khasra No. _____

Signed by Shri (Name in full
the lessee)

the constituted attorney of the lessee.

Signed by Shri (Name in Full)
for and on behalf of the
President of India

In the presence of

1. Name in full (Signature)
with designation.

2. Name in full (Signature)
with designation.

1. Name in full (Signature)
with designation.

2. Name in full (Signature)
with designation.

MEMORANDUM OF ASSOCIATION OF TRUCK OPERATORS HIGHWAYS AMENITIES SOCIETY

1. The name of the Society will be Truck Operators Highway Amenities Society hereinafter called the 'Society'.
2. The Registered office of the Society shall be situated in the Union Territory of Delhi. At present it is situated at _____, New Delhi.
3. The OBJECTS for which the TRUST is established are :
 - a. To found and establish on or about the National Highways, Parking Complexes including truck parks resting places for the truck operators, their drivers, cleaners and other operating staff etc., and provision of such other amenities like lodging, boarding etc. for them as will be conducive to their well being.
 - b. To establish and maintain reading room and a common place for recreation, indoor sports or other activities designed from time to time to develop civic consciousness and reputable conduct and character amongst the truck operators and drivers.
 - c. To promote temperance and community building amongst truck drivers and operators.
 - d. To improve the efficiency of the truck drivers and other staff through inculcation of hygienic ideas and living amongst the truck operators and staff.
 - e. To provide and maintain first aid or medical assistance and/or other identical reliefs on or around the National Highways in emergencies and accidents.
 - f. To provide facilities for repairs to vehicles in case of breakdowns and emergencies.
4. For achieving the above objects the Society may :-
 - i) take over appropriate areas of land or land sites in or around the National Highways from the Central Government;
 - ii) build, construct and maintain resting places, dormitories etc. with the help of funds subscribed by the truck operators, Government or other public organisations or charities to the extent and in such manner as determined by the Society

- from time to time including maintenance of such installations and services as are provided by Govt. initially
- iii) to allow parking of commercial and other vehicles plying on the Highways against appropriate fees or charges, determined by the Society from time to time;
 - iv) provide boarding and lodging facilities to truck drivers and drivers of other vehicles and staff against appropriate charges;
 - v) hold and manage all funds, subscriptions and donations for the above purposes;
 - vi) carry on or give directions for necessary additions, alterations in the properties;
 - vii) open accounts in the name of the Society with banks or bankers and to operate on the same;
 - viii) raise funds for carrying out the objects of the Society on such terms and conditions as the Governing Body may from time to time deem fit;
 - ix) invest surplus funds for the time being or otherwise on such terms and conditions as may be deemed expedient by the Governing Body.
 - x) employ necessary staff;
 - xi) to provide facilities for repairs to vehicles in case of breakdown such as repair shops, mobile workshops, recovery vans, spare part shops etc; and
 - xii) to all such other acts or things as may be incidental or conducive to attainment of any or all of the above said objects.

5. There shall be constituted a Governing Body, entrusted with the management of the affairs of the Society, as required under the Societies Registration Act of 1860 as extended to various States and Union Territories in India.

6. The names, addresses, occupations and designations of the members of the First Governing Body shall be as under :-

S.No.	Name	Full Residential Address	Occupation	Designation
1.				President.
2.				Secretary
3 to 9				Members

7. We, the undersigned are desirous of forming a Society named _____ under the Society Registration Act xxi of 1860 (Punjab Amendment Act, 1957) as extended to the Union Territory of Delhi in pursuance of this Memorandum of Association :-

1.	5.
2.	6.
3.	7.
4.	8.

RULES & REGULATIONS OF TRUCK OPERATORS HIGHWAY AMENITIES SOCIETY

1. All signatories to the Memorandum of Association shall be Founder Members of the Society.

GOVERNING BODY

2. (a) There shall be an Apex Governing Body comprising the following :

i)	A representative of Ministry of Shipping & Transport, Transport Wing	(Chairman).
ii)	A representative of Ministry of Shipping & Transport, Roads Wing	
iii)	Transport Commissioner/Controller of the States wherein amenities are provided.	To be nominated by Chairman.
iv)	Chief Engineer, P.W.D. of the States wherein amenities are provided.	
v)	D.I.G. (Traffic) of the States wherein amenities are provided.	
vi)	Secretary General of All India Motor Transport Congress	(Secretary)
vii)	President of State Level Association of Truck Operators wherein amenities are provided.	To be nominated by Chairman

Provided that the representatives from States vide item Nos. (iii), (iv) and (v) will be limited to three from each category and 6 from category (vii) and they shall hold office for a period of two years from the date of their nomination.

2.(b) There shall be branch units of the Society for each States and its Governing Body shall be constituted as follows :-

- i) Transport Commissioner/Controller (Chairman)
- ii) A representative of the Roads Wing of the Union Ministry of Transport.
- iii) A representative of the Transport Wing of the Union Ministry of Transport.
- iv) Chief Engineer of State P.W.D. or his nominee.
- v) A.I.G./S.P. (Traffic) of State.
- vi) A representative of the AMTC
- vii) A representative of the IFTO
- viii) President State Level Truck Unions/Association. (Member Secretary).
- ix) A representative member of the truck unions from each region in the State elected by a body composed of the President or their nominees of each district.

3. The list of Governing Body members shall be filed with Registrar of Societies every year as is required under the Societies Registration Act, 1860.

Apex Governing Body — its powers and duties

4. The Apex Governing Body shall exercise the following powers and perform the following duties, namely :-

- i) to determine all questions of general policy of the Society.
- ii) to add, alter or amend the Rules & Regulations by atleast 3/4 majority opinion of the said body present at a meeting of which due notice has been given to each member.
- iii) to control and coordinate the working of the State units and issue them suitable instructions from time to time.
- iv) to review the working and financial performance of the State units.

5. The office of the member shall fall vacant :-

- i) if he dies or voluntarily resigns his office or on the expiration of the period; or
- ii) if he is adjudged insolvent or of unsound mind; or
- iii) if he is absent, without sufficient cause and without prior leave from 3 consecutive meetings of the Apex or State Board; or
- iv) if he is convicted of any offence involving moral turpitude; or
- v) if he accepts service under and becomes an employee of Society; or
- vi) being ex-officio trustee, nominated by Central or State Government where his nomination is withdrawn.

6. The office and the Secretariat assistance required for the functioning of the Apex Body shall be provided by the All India Motor Transport Congress free of charge.

Powers of Unit Governing Bodies

The State Unit of the Society shall exercise the following powers and perform the following duties, namely :—

- (a) take over appropriate areas of land sites in or around the National Highways from the Central Government
- (b) build, construct and maintain resting places, dormitories etc. with the help of funds subscribed by the truck operators, Government or other Public organisations or charities to the extent and in such a manner as determined from time to time including maintenance of such installations and services as are provided by Government initially.
- (c) allow parking of commercial and other vehicles plying on the highways against appropriate fees or charges, determined from time to time.
- (d) provide boarding and lodging facilities to truck drivers and staff against appropriate charges.
- (e) hold and manage all funds, subscriptions and donations for the above purpose of the said unit.
- (f) carry on necessary additions, alterations in the properties.
- (g) open accounts in the name of the Society (Unit) with banks or bankers and to operate on the same.
- (h) raise funds for carrying out the objects of the Society, on such terms and conditions as the Governing Body may from time to time deem fit. To start with, there shall be a minimum contribution of Rs 100/- from each truck registered in the State.
- (i) to determine the scale of fees and charges from time to time of parking of vehicles inside the complexes, boarding, lodging and other facilities.
- (j) invest surplus funds for the time being or otherwise on such terms and conditions as may be deemed expedient in consultation with the Apex Body.
- (k) employ necessary staff or retrench them, if necessary.
- (l) do all such other acts or things as may be incidental or conducive to attainment of any or all of the above said objects.
- (m) to provide for the Apex Governing Body its balance-sheet duly audited by a Chartered Accountant within three months of the close of the each financial year.

Holding of Meetings

- 7. (a) The Annual general meeting of the Apex Governing Body shall be called after giving due notice as required under law.
- (b) The Governing Body of State Unit shall meet at least three times in a year including annual General meeting.
- (c) The quorum for Apex/State Governing Body shall be three out of which atleast one shall be a non-official.

- (d) A copy of the proceedings of each meeting of the Governing Body shall be circulated for the information of the members as soon as possible after the meeting, and the minutes of the meeting of the State Unit shall be forwarded to the Apex Governing Body. The Secretary shall ordinarily circulate amongst the Members of the Apex or State unit Governing Body a notice of at least 15 days before such meeting together with the agenda or business to be brought before the meeting.
8. Any resolution circulated to all members of the Apex or State Unit Governing Body to which the assent of at least $\frac{1}{4}$ of members is recorded in writing shall be as valid and effectual as it was passed at a meeting of the Apex or State Unit Governing Body as the case may be.
 9. In case of emergency, the Chairman may direct a meeting to be called by a shorter notice which shall however be not less than three days. Such meeting shall be called by the Chairman or it may be requisitioned in writing by at least 5 members of the Apex Board or 3 members of the State Unit for any specific purposes.
 10. In case any issue in the meeting of the Governing Body is decided by voting and there being equal votes for and against, the Chairman in that event shall have additional casting vote and decide the issue.
 11. Chairman of each unit shall conduct the proceedings of the Meetings and shall also have all executive Authority. The Secretary of the Apex Governing Body and State Unit Governing Body shall be responsible for the day to day control of the staff and their discipline. He shall also carry out all the directions and instructions of the relevant Governing Body and do and execute all routine work connected with the administration.

Funds, Finances & General

12. The Income of the Society from the various complexes shall be applied for the management and improvement of the complexes to which it relates and solely for attainment of the objects of the Society as set out in the Memorandum of Association and no portion thereof shall be paid or transferred directly or indirectly by way of bonus or otherwise to the persons who at any time are or have been members of the Society provided that nothing herein contained shall prevent the payment in good faith, or remuneration to any officer of the Society for services rendered. The funds of the Apex body will be operated by the Chairman and the Secretary. The funds of the branches will be operated by the Chairman of the local branches and its Secretary.
13. In respect of each complex, accounts shall be maintained for amounts expended from time to time, as well as of all receipts of parking fees, boarding and expenditure statement shall be prepared for the year as a whole on 31st March every year. These yearly accounts shall be consolidated for each State unit separately and presented to the Annual Meeting of the respective State Unit Governing Body before the 30th June each year. The Governing Body shall have these accounts audited and certified by a Chartered Accountant and take steps to remedy any defects and defalcations, with appropriate disciplinary/legal action against the defaulters and offenders.
14. The respective State Unit Governing Body may appoint requisite staff for the complexes under their jurisdiction to manage and administer the same and also appoint such agents or contractors as deemed fit in connection with the affairs of the complexes.
15. The members of the Governing Body shall not be entitled to any remuneration but they may be paid travelling and other expenses as per Government of India rules in case of Apex Board and State Government rules in case of State units.
16. In the professed execution of the Society and powers thereof, no members of the Governing Bodies shall be liable for any loss to the Society's Property or for the negligence or fraud of any agent or by any co-member.
17. This Society may sue or be sued in the name of its Chairman as per section 6 of the Societies Act, 1860.
18. The Society may be dissolved by 3/5ths members of the Apex and State Unit Governing Bodies together, who shall also decide the manner of dissolution and appropriation of its assets and liabilities, according to sections 13 and 14 of the Societies Registration Act, 1860.
19. Any amendments in the Memorandum and Rules and Regulations of the Society will be carried out according to Section 12 and 12A of the Societies Registration Act, 1860.
20. In regard to the provisions which are not provided expressly in the Memorandum and Rules & Regulations of the Society, the provisions of the Societies Act xxi of 1860 (Punjab Amendment Act 1957) extended to the Union Territory of Delhi will apply to this Society.

Certified that this is the correct copy of the Rules and Regulations and Byelaws of the Society

1. Shri
2. Shri
3. Shri
4. Shri
5. Shri

701.3.

No. NHIII/P/37/77

Dated the 1st August, 1979

To

All State Governments/Union Territories,
(Deptts. dealing with National Highways)

Subject : Construction of pick-up bus stops on National Highways in rural (non-urban) areas

I am directed to say that certain guidelines regarding the construction of pick-up bus stops on National Highways were issued earlier by this Ministry vide letter No. WI-1 (19)/59 dated the 21st Decem-

ber, 1959. According to these instructions, the State Governments were required to examine each proposal, and if it conformed to the stipulations contained in the above letter, the same was to be sent to this Ministry along with their recommendations and a draft of the lease deed to be executed between the party concerned and the Govt of India.

2. The above instructions have been reviewed by the Ministry and in supersession thereof, it has been decided to authorise the State Chief Engineers themselves to accord permission for the construction of the pick-up bus stops on National Highways, provided the conditions set out in the Annexure are satisfied. It has also been decided that no lease deed need be executed for the use of National Highway land for the purpose.

3. When any permission is accorded in accordance with the conditions in the Annexure, a copy of the approval letter along with a copy of the letter from the bus stop agency accepting the stipulated design, terms and conditions etc. should be forwarded to the Ministry for information and record.

4. Cases where the stipulated conditions are not satisfied, should not be approved, but the bus stop agency asked to make the necessary modifications. After modification, such cases can be dealt with as in para 2 above.

5. All proposals where it is not practicable to fulfil the stipulated conditions, but the Chief Engineer recommends certain relaxations, may be referred to the Ministry for final decision with reasons for relaxation. Till a final decision is reached, the State Govts. should not enter into any commitment with the bus stop agency.

6. It is requested that the contents of this circular may be brought to the notice of all concerned officers in your Department dealing with National Highways.

ANNEXURE

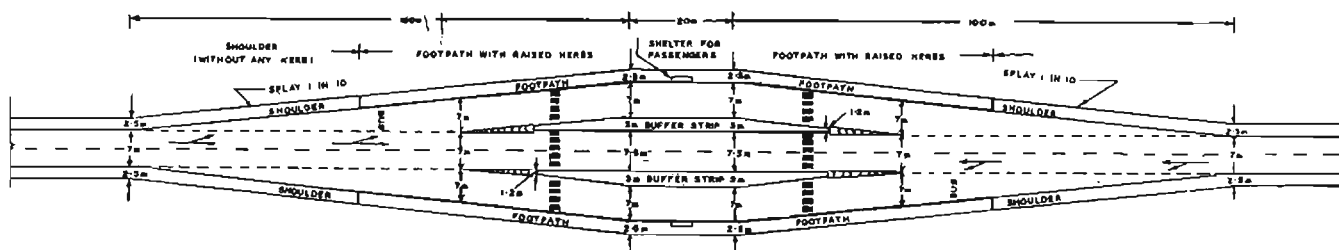
(Enclosure to Letter No. NHIII/P/37/77 dt. 1.8.79)

CONDITIONS TO BE SATISFIED FOR ACCORDING PERMISSION TO PICK-UP BUS STOPS ON NATIONAL HIGHWAYS IN RURAL (NON-URBAN) AREAS

1. Location

- The governing consideration in locating pick-up bus stops should be minimum interference to the normal flow of traffic by buses using the amenity.
- Generally bus stops should be located away from congested sections of the highways, as also from bridges and any other important structures and embankments of heights more than four metres. Preferably, these should not be sited on horizontal curves.
- Bus stops should not be located too close to road intersections since that will cause disruption to traffic flow. The distance should preferably be 300 metres, especially on junctions with main roads. In other cases, this might be judiciously relaxed to a certain extent considering the local conditions. In the case of minor intersections (e.g. junctions with village roads), a distance of 60 metres may be permitted as a special case. If a substantial volume of buses is to turn right at an intersection, the bus stop will need to be located sufficiently away so that the buses can be manoeuvred easily from the kerb to the extreme right lane well ahead of the intersection.
- In the case of major 4-way intersections involving transshipment of appreciable number of passengers from one pick-up stop to the other, it will be desirable to construct a single composite bus stop of suitable size and layout, sufficiently away from the intersection, so as to cater to all the bus routes collectively.

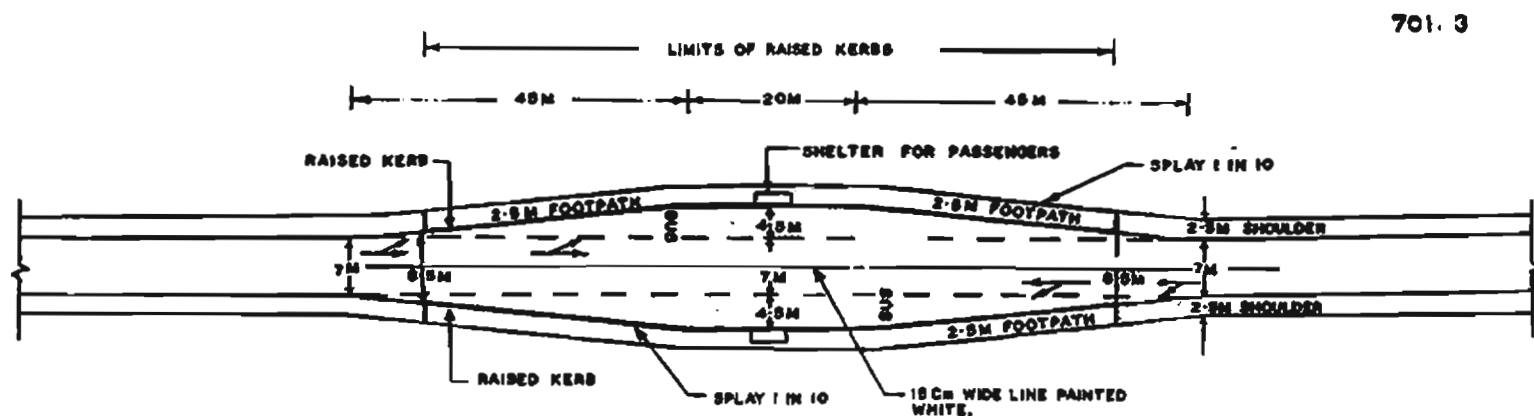
701. 3



NOTES -

- FOR DETAILED GUIDANCE ABOUT LOCATION, LAYOUT, DESIGN ETC. OF BUS STOPS, SEE INSTRUCTIONS CONTAINED IN MINISTRY'S LETTER NO. NH III/P/37/77 DATED 1-8-78.
- ADEQUATE FACILITIES FOR EFFICIENT DRAINAGE OF THE BUS STOP AREA INCLUDING LAY-BYES SHOULD BE ENSURED.
- PAVEMENT MARKINGS SHOULD BE PROVIDED AS INDICATED ON THE DRAWING. THE WORD 'BUS' SHOULD BE WRITTEN ON THE PAVEMENT AT THE ENTRY TO THE BUS BAY. FOR DETAILED GUIDANCE, SEE IRC-38.
- IN THE BUS STOP AREA, THE SHOULDER ON EITHER SIDE SHOULD BE RAISED TO FORM FOOTPATHS AS MARKED ON THE DRAWING. THE JUNCTION BETWEEN SHOULDER AND FOOTPATH SHOULD BE SMOOTHLY TRANSITIONED BY A RAMP.

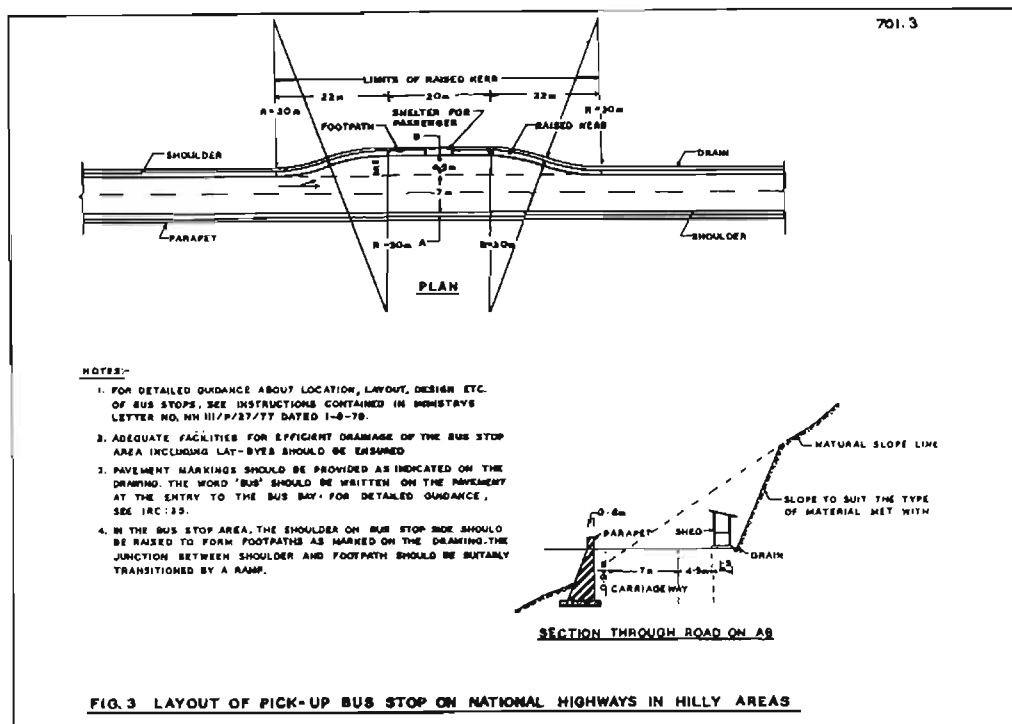
FIG. 1 RECOMMENDED LAYOUT FOR PICK-UP BUS STOP ON BUSY NATIONAL HIGHWAYS



NOTES

1. FOR DETAILED GUIDANCE ABOUT LOCATION, LAYOUT, DESIGN ETC OF BUS STOPS. SEE INSTRUCTIONS CONTAINED IN MINISTRY'S LETTER NO NH IN/P/37/77 DATED 1-8-79
2. ADEQUATE FACILITIES FOR EFFICIENT DRAINAGE OF THE BUS STOP AREA INCLUDING LAY-BYES SHOULD BE ENSURED.
3. PAVEMENT MARKINGS SHOULD BE PROVIDED AS INDICATED ON THE DRAWING THE WORD 'BUS' SHOULD BE WRITTEN ON THE PAVEMENT AT THE ENTRY TO THE BUS BAY FOR DETAILED GUIDANCE, SEE IRC:35
4. IN THE BUS STOP AREA, THE SHOULDERS ON EITHER SIDE SHOULD BE RAISED TO FORM FOOTPATHS AS MARKED ON THE DRAWING. THE JUNCTION BETWEEN SHOULDER AND FOOTPATH SHOULD BE SUITABLY TRANSITIONED BY A RAMP.

FIG -2 RECOMMENDED LAYOUT FOR PICK-UP BUS STOP ON NATIONAL HIGHWAYS CARRYING LIGHT TRAFFIC



5. The bus stops should be so located that good visibility is available allround.
6. In hilly areas, the bus stops should normally be located where the road is straight on both sides, the gradient is level or as flat as possible and visibility is reasonably good (say not less than 50 metres). Subject to these requirements being fulfilled, it will be advisable to choose locations where it is possible to widen the roadway economically for accommodating bus lay-byes, passenger shelters, etc. Presence of the bus stops should be duly notified through advance information signs posted at least 50 metres ahead.

II. Layout and Design

1. Recommended layout for pick-up bus stops on busy National Highways is given in Fig. 1. For bus stops on lightly trafficked sections of National Highways or where only a very few buses are expected to halt, the layout shown in Fig. 2 may be adopted. In hilly areas, where there is a general constraint for space, the simple layout indicated in Fig. 3 may be adopted.
2. Normally, bus stops and lay-byes should be provided on both sides of the road for either direction of traffic so that buses do not have to cut across the road.
3. Bus stops on either side of the road may be located opposite to each other, or staggered if the site conditions so necessitate.
4. The pavement area of the lay-byes should be adequately surfaced, comparable to the standard of the adjoining National Highways carriageway.
5. No structure other than sheds for passengers should be permitted at the bus stops. The sheds should be structurally safe and aesthetic in appearance, while also being functional so as to protect the waiting passengers adequately from sun and rain. Where the shed is constructed on the hill side, slopes should be properly dressed and suitably protected to avoid slips.
6. On important bus stops, temporary type of toilet facilities with necessary arrangements for disposal of effluents (for instance with the help of soak pits) might also be provided close to the roadland boundary and sufficiently away from the passenger shelters.

III. Construction and Maintenance

1. The bus stops and appurtenants thereto should be constructed and maintained by the Bus Stop Agency to the satisfaction of the Highway Authority. If the laybys etc. are not kept maintained in proper condition, the Highway Authority will have the right to make the necessary repairs at the cost of bus stop agency.
2. Adequate facilities for efficient drainage of the bus stop area including the lay-byes should be ensured.
3. Suitable pavement markings should be provided in the bus stop area as indicated on the drawings, and these should be maintained regularly. For detailed guidance in this regard, reference may be made to IRC Standard No : 35 "Code of Practice for Road Markings (with paints)".

IV. Removal and Relocation

1. If the Highway Authority considers it necessary at any time to remove and relocate the bus stop and lay-byes on account of any work of improvement or widening the road, it will be carried out by the bus stop agency at its cost within a reasonable time (not exceeding 60 days) as desired by the Highway Authority. Failing that, the work will be done by the Highway Authority itself at the cost of the concerned agency.

No. NHIII/P/16/82

Dated the 11th May, 1982

To

All State Governments
(Departments dealing with Roads)

Subject : Provision of wayside amenities along highways

As you are aware, provision of roadside amenities along Highways contribute greatly to the safety, convenience and enjoyment of road travellers. The choice of location, the type of facility and its frequency will depend upon the classification of the Highway, the traffic volume, topography and other related factors. The main consideration should be that the amenities provided should fit in smoothly with the natural surroundings.

2. Roadside rest area is one of the important roadside amenities. It is intended for rest and relaxation by long distance travellers and may be in the form of inspection or rest houses. In the selection of individual sites, due consideration should be given to the topography, existing vegetation, scenic value of their location, availability of facilities like water supply, sewerage, etc. By proper selection and planning, such areas can be developed with minimum cost.

3. The second type of amenity will be the layby facilities which are intended mainly for the convenience of long distance operators. These provide the same facilities as roadside rest areas, but parking area will be bigger to accommodate large number of trucks etc.

4. In this connection, it is to be brought out that the Government of Haryana have made large strides in respect of such amenities specially along National Highway routes. Recently, the Minister of Shipping and Transport had an occasion to inspect these amenities in Haryana and he has commended adoption of the same by all States. All State Governments are requested to look into the matter and arrange to initiate suitable action in this regard for providing necessary facilities at least along National Highways.

No. NHVI-50 (9)/83

Dated the 11th July, 1983

Subject : Wayside amenities on National Highways construction of Truck Parking Areas/Complexes

The question of providing Truck Parking Complexes on national highways as wayside amenities to Truck Operators has been engaging the attention of the Ministry for the past sometime. Proposals for setting up of two Truck Parking Complexes were sanctioned in September, 1977, one at an estimated cost of Rs 6.13 lakhs at Murthal in Haryana and another for Rs 9.98 lakhs at Kotkalan, Jullundur in Punjab. Consequent to this and after discussions in various high level meetings including the Transport Development Council, a scheme for setting up of Truck Parking Complexes has been formulated (copy at Appendix I). Salient features of this scheme are :

- (i) Truck Parking Complexes should be set up on National Highways at suitable locations.
- (ii) The cost of land i.e. land acquisition, services compound wall, paving of internal roads, approach roads and parking area for Trucks etc.) in the Truck Parking Complexes will be borne by the Govt. of India in the case of National Highways.
- (iii) A revolving fund may be created to take care of aspects like the construction and maintenance of buildings and structures required for canteens, dormitories, vehicle repair facilities, shops etc. and for running and management of the truck parking complexes on no profit no loss basis. Appropriate fees to be fixed by the Society will be charged from the truckers for availing of the facilities.
- (iv) The proposed revolving fund will be started by raising contributions from Truck Operators through their unions or otherwise at the rate of Rs. 100/- per Truck to begin with.
- (v) The revolving fund will be operated by a Society with its branch units in the States. The Society at apex level at the Centre will function under the Chairmanship of an Officer of the Ministry of Shipping & Transport and the branch units of the Society in the States shall function under the Chairmanship of Transport Commissioner/Controller of the concerned State.

2. In the light of the above, the Govt. have also drawn up a Memorandum of Association of rules and regulations of the proposed Truck Operators, Highways Amenities Society. A copy of the revised model agreement for Truck Parking Complex is enclosed at Appendix.

3. This Ministry had recently sponsored a study of the extent and scale of roadside amenities on NH No. I (Delhi Amritsar route). This study was conducted by the National Council of Applied Economic Research, New Delhi. The report of this study has since been received. It has been suggested that such

truck parking complexes could be near the existing sites or various clusters of Dhabas. It has also been recommended by the study agency that the complex should have improved parking area, modern sanitation, drinking water and the Dhabas for food, besides rest area.

4. It is felt that there is no organised wayside amenities for the Truck Operators on our NH system. It is essential to expand this scheme in different parts of the country. To start with, it may be worthwhile to consider setting up such Truck Parking Complexes at suitable intervals say 250 to 300 km on selected major Arterial Routes on our National Highway system. It may also be a good idea to consider some locations at the State (s) boundaries where lot of checking departments are situated and there is potential for truck operators to halt for sometime. All Project Chief Engineers are therefore requested to assess and identify the requirements of such Complexes in the states being dealt with by them. The Ministry's share of the cost for one complex may be Rs 20.0 lakhs or so. Suitable provision for such works will also need to be made in the 7th Plan and Annual Plan of 1984-85.

701.6.

No. TW/TDC/19/84

Dated the 23rd Nov, 1984

To

1. The Secretaries of Transport Deptts. of all States/UT Admns.
2. The Transport Commissioners/Controllers of all States/UT Admns.

Subject : 18th Meeting of the Transport Development Council-implementation of scheme of establishment of truck parking complex along highways

I am directed to refer to para 19.1 of the minutes of the 18th Meeting of the Transport Development Council forwarded under this Ministry's letter No. TW/TDC/7/84 dated 9th August, 1984 on the subject noted above. Relevant extracts of the minutes are reproduced here under :—

"The Council has recommended that the State Govts. should urgently take up the work of construction of truck parking complexes, after identifying the suitable sites, within their jurisdiction and formulating appropriate schemes"

2. A brief write-up on the scheme relating to Truck Parking Complex is enclosed, for ready reference.
3. You are requested to let this Ministry know the action being taken to implement the above recommendation of the Council. The first progress of implementation report may kindly be sent so as to reach this Ministry latest by 30th Dec., 1984, to be followed by subsequent monthly report.

Note : See enclosures to letter No. N-I/PB/17/76 dated 10.7.79

NOTE ON THE SCHEME OF ESTABLISHMENT OF TRUCK PARKING COMPLEX ALONGWITH NATIONAL HIGHWAYS

Over the years, long distance road haulage has been showing a rising trend. The incidence of road accidents also has been going high. One of the reasons ascribed to the growth in road accidents has been the non-availability of adequate resting places along the highways for truck drivers and the crew to take rest and to relieve themselves of the fatigue arising out of long and tedious journeys. Truck parking complexes had been the subject matter in discussions at various forums including Transport Development Council. In order to encourage setting up of truck parking complexes along national highways, the Government of India had formulated a Scheme. Under this the basic objective was that truck parking complexes should be set up at convenient locations at a distance of about 300 kms on selected major arterial routes and that such complex should provide wayside amenities for the truck operators. The amenities envisaged are the facilities of parking, refueling, carrying out of repairs, supply of spare-parts, canteen, board & lodge etc.

2. Salient features of the Scheme are :

- (i) That there should be an apex society called Truck Operators Highway Amenities Society (TOHAS) which shall have state units. The apex Society shall concern itself with policy formulation and coordination of the working of State units. The actual work of implementation, namely, setting up of truck parking complexes and running them would be the function of State units. While the apex society shall be headed by Joint Secretary (Transport), Ministry of Shipping & Transport, the State unit shall be headed by respective Transport Commissioner. The Governing body of the State unit is to include representatives of Union Ministry, State PWD, State Traffic Police, All India Motor Transport Congress, State level Truck Union/Associations etc.
- (ii) The State unit of the TOHAS shall, after identifying suitable locations, formulate the project proposals and submit the proposal to the Director General (R.D) Roads Wing of Ministry of Shipping & Transport for financial assistance, which will be to meet the expenditure on cost of land i.e. land acquisition, boundary wall, paving of internal roads, approach roads and parking area for trucks etc.

- (iii) The State unit of the Society is to create a revolving fund to take care of aspects like construction and maintenance of buildings, structures required for canteens, dormitories, vehicle repair facilities, shops, etc. The running and management of truck parking complexes is to be on 'No profit no losses' basis and the money for meeting recurring expenditure is to come through the method of fees to be fixed by the Society and charged from the trucks for availing of the facilities.
 - (iv) Initially the proposed revolving fund will be started by raising contributions from truck operators through their unions or otherwise Rs 100/- per truck.
 - (v) The revolving fund will be operated by a Society with its branch unit in the State.
3. Ministry's share of cost for one complex could be in the region of Rs 20 lakhs or so.
 4. A copy each of the Memorandum of Association of Truck Operators Highway Amenities Society and a copy of the Model Agreement to be entered into by a Society with the Government is enclosed for ready information.
 5. The apex level society has already been established on 1st April, 1980. Two specific projects one at Murthal in Haryana and another in Jullundhur in Punjab have been initially taken up. Proposals from other State Units are awaited.
 6. As can be seen, Transport Commissioners/Transport Controllers/Directors of Transport of the state Govts/UT Administrations are the pivotal officers have to ensure implementation. Despite a number of letters from both the Ministry of Shipping and Transport as also Secretary General of the TOHAS, response is to the action being taken proposed to be taken, the time frame for such an action, etc. has not been forthcoming. A good scheme, therefore, is still not getting off the ground. Special attention is required to be paid by the Transport Secretaries and Transport Commissioners, particularly the latter (a) Setting up a State unit of TOHAS (b) Identifying locations for Truck-Park Complexes (c) Initiating steps for acquiring the land (d) Formulation of project proposal with financial implications of all aspects (e) Securing financial assistance from the Govt. of India to the extent of entitlement (f) to collect contributions from truck operators for initial revolving fund (g) setting in motion to State Unit for activities of development of land and construction activities etc.
 7. Member-Secretary, TOHAS is Shri Chattarajan Dass. Secy. Gen. All India Motor Transport Congress, 16, Asaf Ali Road, New Delhi. He may be contacted for any other information required.

702 LANDSCAPING & TREE PLANTATION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
702.1.	NHI-41 (34)/69 dt. 6.12.69	Development of Gardens on Traffic Rotaries and/or on road margins of NHs-Requests from Firms & Individuals	702/1
702.2.	NHIII-P/15/75 dt. 20.5.76	Plantation, Maintenance & Cutting of Trees on National Highways	702/1
702.3.	NHIII-P/15/75 dt. 31.7.76	Landscaping along National Highways	702/4
702.4.	NHIII/P/15/75 dt. 1.6.78	—do—	702/5
702.5.	D.O. No. NHIII/P/15/75 dt. 7.9.78	—do—	702/5
702.6.	NHIII/P/43/78 dt. 2.3.79	Plantation of Tress on National Highways	702/5
702.7. 4110.	D.O. No. NHIII/P/15/75 dt. 8.6.79	Landscaping & Arboriculture from Maintenance Funds	702/6
702.8.	NHIII/P/15/75 dt. 3.8.79	Plantation, Maintenance and Cutting of Trees on National Highways	702/7
702.9.	NHIII/P/15/75 dt. 12.6.81	Banding of Trees and Delineation objects along National Highways	702/7
702.10.	7.11/82-FRY (P) dt. 1.4.82.	New 20-Point Programme	702/8
702.11.	3-4/82-FRY (P) dt. 5.5.82	Centrally Sponsored Special Forestry including Rural Fuel-wood Plantations Schemes	702/8
702.12.	Forest Act 1927	Extracts of Penal Clauses from Indian Forests Act, 1927-Chapter IX Penalty & Procedures	702/9
702.13.	D.O. No. NHVI-50 (3)/83 dt. 24.6.83	Provision of flowering plants near Bridges across rivers of NHs & other Centrally Sponsored Roads, Proper Location of Store Sheds	702/10

702.1

No. NHI-41 (34)/69

Dated the 6th December, 1969

To

All the State Governments/Administrations of Union Territories
(Departments dealing with National Highways)

Subject : Development of gardens on traffic rotaries and/or on road margins of National Highways-Requests from firms & individuals

I am directed to say that requests have been received from firms and individuals of repute for permission to develop and maintain at their cost gardens on traffic rotaries and/or on road margins of National Highways with a view to beautify the road. Often the firm or individual desire to publicise this free service on a hoarding fixed in the garden itself. Though normally we should welcome and agree to such offers subject to the conditions that the hoarding will be uplighted and of the maximum size of 24 in. × 15 in. so as to make it imperceptible to the vehicle drivers, the garden will be developed and maintained to the satisfaction of the Engineer-in-Charge, and the garden will be vacated, if so desired, for the development of the road or for any other public purpose in a clean condition within one month of the notice from the Engineer-in-Charge, yet it is apprehended that once having agreed to in the case of firms or individuals of repute, it would be difficult to refuse in the case of those of unestablished repute. The firms or individuals of unestablished repute are likely to prove difficult when it comes to getting the National Highway land vacated. Under the circumstances, it has been decided not to allow firms and individuals (private bodies) to develop and maintain gardens on traffic rotaries and/or on road margins of National Highways.

In this connection, it may be emphasised that traffic rotaries and road margins of National Highways should always be kept tidy by Highway authorities from maintenance funds. This will keep the road aesthetically pleasing and eliminate coming up of requests of the type mentioned above.

702.2.

No. NHIII-P/15/75

Dated the 20th May, 1976

To

All State and Union Territory Governments
(Departments dealing with National Highways)

Subject : Plantation, Maintenance and cutting of Trees on National Highways

In supersession of all instructions issued *vide* circulars referred to in the Appendix, I am directed to issue the following instructions on the subject mentioned above.

2. *Plantation of Trees along National Higwhways*

2.1. *Location of trees*

Trees should be placed at a minimum distance of 10-12 metres from the centre line of the extreme traffic lane to provide recovery area for the vehicle that runs off the road. A second row of trees 6 m. further away will also be desirable and planted wherever possible. Preferably the first row of trees should consist of species with thick shade and other rows of vertical type providing thin shade. However, further road expansion programme should be kept in view while locating the trees.

2.2. *Removal and plantation of trees*

Existing trees should generally be preserved as far as possible, and no indiscriminate felling of trees should be resorted while upgrading/widening and improving the highway. Trees located on roadway or embankment slopes have proved to be potential traffic hazard to vehicles going off the carriageway and hitting against them. Therefore, wherever the trees on National Highways are either on the roadway itself or too close to it constituting safety hazard, these shall be replaced systematically by alternative plantation. The existing trees by the side of the roadway, which in the opinion of Engineer-in-Chief are serious threat to safety should be removed immediately, after obtaining the approval of competent authority (refer para 3). Other trees within 10 m of the centre line of extreme traffic lane should be removed gradually after planting alternative trees.

2.3. *Wherever there is a possibility of : (i) trees dying due to old age; (ii) removal for widening and*

improvement; of (iii) removal for traffic safety, alternative trees must be planted to replace them well in advance. While planting new trees care should be taken to maintain lateral clearances mentioned in para 2.1.

2.4. *Temporary trees and shrubs*

Since permanent trees will take time to grow as an immediate measure quick-growing temporary trees may be planted in between the space for permanent trees which may be removed after the permanent ones have grown up.

2.5. *Selection of species of trees*

The spacing and type of permanent and temporary trees to be planted in any locality will depend on local conditions such as rainfall, climate type of soil etc. Selection of tree-species should, therefore, be carefully done with the advice of officers from horticulture or forest department. Age and the time at which the tree is transplanted from nurseries should be decided in consultation with horticulturist as small saplings generally have a high rate of fatality and their planting should be discouraged. In addition to growing of trees, efforts should be directed for planting the flowering sub-trees and shrubs on the sides of road embankments in tune with an overall landscaping scheme prepared by landscape or horticulture experts.

2.6. *Typical arrangement*

A general scheme of roadside plantation as suggested above is illustrated in the enclosed figure. The arrangement should be regarded as merely indicative and not definitive. These recommendations are meant to be applied not only to two-lane highways but also multi-lane highways. In the case of a 4-lane divided highway, the distances for alternative rows of trees given in para 2.1 should be reckoned from the nearest unidirectional carriageway. No indiscriminate felling of trees is resorted to at the time of upgrading a two-lane road to 4-lane divided standards. As far as possible, the existing trees should be preserved by suitably locating the second carriageway within the available right-of-way by adopting a wide enough central verge.

2.7. *Set-back of trees on curves*

Experience has been that growth of thick vegetation close to the formation on inside of horizontal curve leads to serious reduction of sight distance and causes avoidable accidents with cattle/children suddenly emerging from the side. Uncontrolled trees/vegetation may also affect visibility of traffic control devices and road signs. Therefore, in plain terrain, a stopping sight distance of 170 m corresponding to the design speed of 100 Km. P.H. may be ensured on all curved sections of National Highways along the innermost lane. However where there are site restrictions this requirement may be, as a special case, reduced to 120 m corresponding the design speed of 80 Km. P.H. The existing trees and vegetation on the sides have to be suitably thinned/trimmed, or even removed if necessary and a regular programme of pruning of the offending trees should be instilled as part of the maintenance operations.

2.8. *Landscaping of bridge approaches*

Bridges constitute an important part of the National Highway and as such landscaping scheme should incorporate them also. Shrubs and flowers should be planted around such structure to beautify the place and side slopes of approaches landscaped with some grassing/flowering trees/bushes. In this connection, the requirement of drainage, stability of slopes and traffic safety should be kept in view and given over-riding consideration.

2.9. *Landscaping and gardening of traffic rotaries*

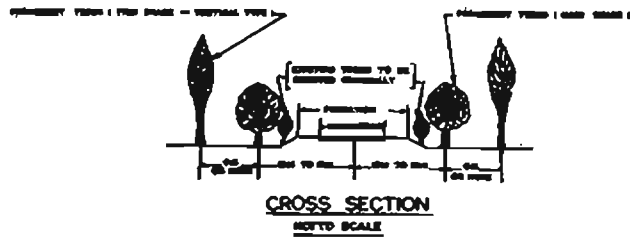
The traffic rotaries and/or road margins of National Highways should always be kept tidy and pleasing by the department dealing with the National Highways. Under no circumstances the firms or individuals (private bodies) should be granted permission to develop and maintain the rotaries and/or road margins on National Highways.

3. *Maintenance and Cutting of Trees*

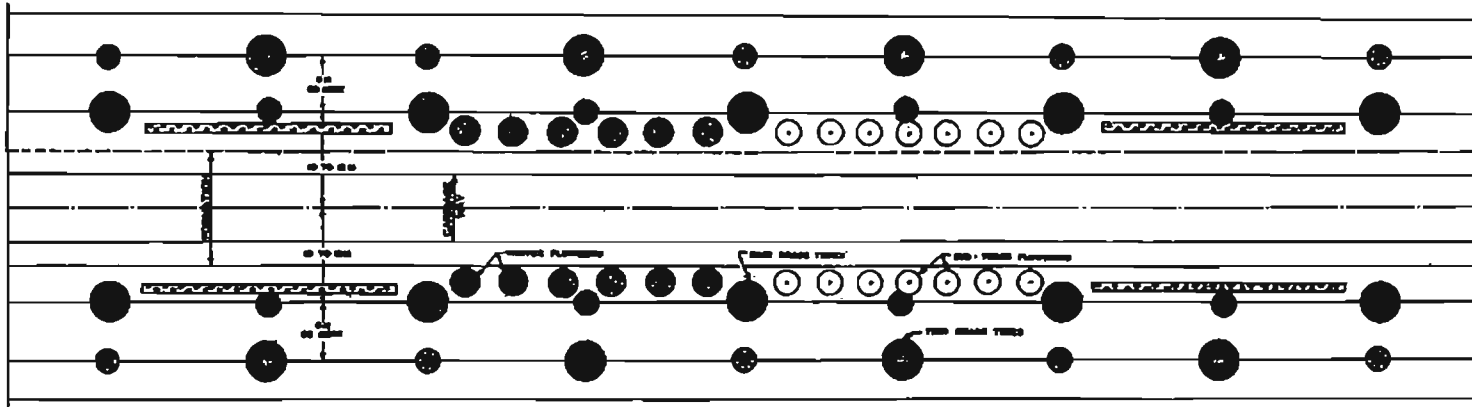
3.1. *Permission to cut trees*

Trees on National Highways are a natural asset paid for from National Highway Funds. These should not be cut or their branches lopped off indiscriminately without the prior approval of the competent authority. However, prior permission will not be necessary in certain special cases like when dry or dead trees are required to be removed for the safety of traffic or pruning of trees being done as a regular feature of maintenance programme. The work of cutting of trees should be carried out only by the authorised department.

LEGEND



- 1. FRONT OF TYPE** _____
- 2. MAIN SHADE** _____
- 3. TOP SHADE (VERTICAL TYPE)** _____
- TEMPORARY TIES** _____
- 4.0-THICK FLOWERS** _____
- THIN QUALITY** _____
- WATER FLOWERS** _____
- OPTIONAL OF THE DEPARTMENT OF THE PROGRESSIVE CHURCH 00**



PLAN
NOT TO SCALE

NOTE:-

1. ON FOUR-LANE DIVIDED ROADS, THE DISTANCES SHOWN IN THE CROSS-SECTION AND PLAN ALONG SIDE SHOULD BE REDUCED FROM THE NEAREST UNIDIRECTIONAL CARLAGEWAY.
2. LATERAL DISTANCE FOR ROWS OF TREES MAY BE INCREASED ON HORIZONTAL CURVES DEPENDING ON VISIBILITY REQUIREMENTS (SEE PARA 3 OF CIRCULAR LETTER 1).
3. THE ARRANGEMENT AND ORDER OF SHrub-TREES, SHRUBS ETC. SHOWN IN THE PLAN IS ONLY INDICATIVE. PLANTING OF TREES IS OFFICIAL AT THE DISCRETION OF THE FORESTERS-IN-CHARGE. AREA OF LANDSCAPE (HORIZONTAL) TREES SHOULD BE OBTAINED FOR PLANNING TREE PLANTATION.

MINISTRY OF SHIPPING AND TRANSPORT
(ROADS WING)
GOVT OF INDIA

ENCLOSURE
TO CIRCULAR
LETTER NO.
HPL-475/75
DL 20.5.76

INDICATIVE ARRANGEMENT
FOR THE PLANTATION OF
TREES ON NATIONAL
HIGHWAYS

3.2. Competent authority for these purposes is the Director General (Road Development), Government of India, Ministry of Shipping and Transport (Roads Wing) or persons authorised by him on his behalf. The officers authorised by Director General (Road Development) to accord permission for specific cases of felling trees are mentioned as under :—

- (i) The Regional Officer of the Ministry, for the felling of trees (including cutting of branches), on the National Highways and the land appurtenant thereto, after satisfying himself that the need for such cutting/felling actually exists and arrangement has been made to plant new trees. Regional Officers shall submit a report of felling authorised by him to the Ministry soon after doing so.
- (ii) State Chief Engineer dealing with National Highway in cases can grant permission where cutting of only a few trees is involved and is considered inevitable e.g. where a power line crosses a National Highway at right angle or a single tree is to be cut because of its dangerous condition or its coming in the widened formation of the road. Chief Engineer shall also furnish to the Director General, (Road Development) particulars of cuttings, authorised by him immediately after he has issued the necessary authorisation to cut. These powers cannot be delegated by the Chief Engineer to lower formations. Where a whole line of trees has to be cut i.e. when an electric line has to travel parallel to an existing highway for a long distance, the case should continue to be referred to Director General (Road Development) or the Regional Officer of the Ministry for approval.

3.3. When the plantation and maintenance of road side trees on National Highways has been handed over by the State Public Works Department to State Forest Department, the Chief Engineer concerned shall delegate his powers to the Chief Conservator of Forests who shall act as the competent authority for permitting felling of trees etc. The Chief Engineer in such cases shall communicate the contents of this letter to Forest Department for compliance and keep associated with them with regard to planning and implementation of proper road side plantation programme through periodical reviews (quarterly or half yearly) and intimate the progress in case of original works in the quarterly reports being furnished to this Ministry. The planning and implementation of landscaping work, however, shall remain with the State Public Works Department.

4. Maintenance of trees and plantation of new ones on existing roads should be done from funds allotted for maintenance and repairs of National Highways. In special cases original work sanctions could be considered for planting new trees on existing roads provided there is justification. These sanctions will be on the basis of detailed estimate. For bypasses and new constructions the project-estimates should provide for plantation and/or landscaping.

5. *Revenues from Trees*

Under Section 4 of the National Highways Act, 1956, the property of all land appurtenant to a National Highway and such structures, fences, trees etc. mentioned in that section fall within that land, vests in the Central Government. As such, the receipt and revenues from avenue trees etc. should be credited to the appropriate Central head of account.

6. It is requested that the circular may be brought to the notice of all concerned officers in the Public Works Department dealing with National Highways with instructions to comply with it.

702.3.

D.O. No. NHIII-P/15/75

Dated the 31st July, 1976

To

All Chief Engineers of State PWDs and UT Admns. dealing with National Highways (By name)

Subject : Landscaping along National Highways

The Ministry has been emphasising the need for landscaping and plantation of trees along the National Highways time and again. Our circular letter of even number dated the 20th May, 1976, giving guidelines in this respect refers.

2. With the advent of the monsoon season, the time is presently opportune to undertake a big drive for landscaping and plantation on the National Highways. This will coincide with the public campaigns and 'vanamahotsavs' under way in different parts of the country for mass plantation of trees.

3. To make the landscaping programme a success, it is requested that a senior officer in your Department may be entrusted with the responsibility for arranging large scale plantation of trees and flowering shrubs along different stretches of the National Highways and keeping a track of the progress. Advice of horticultural specialists may be obtained where necessary. I will be grateful if urgent action is taken and results of landscaping effort intimated to us after three months.

702.4.

D.O. No. NHIII/P/15/75

Dated the 1st June, 1978

From the Union Minister of Shipping & Transport addressed to
the P.W.D. Ministers of all States & Union Territories
dealing with National Highways (By name)

Subject : Landscaping along National Highways

We have been emphasising the need to taking appropriate landscaping measures along National Highways through plantation of trees and flowering shrubs. A detailed consolidated circular to this effect was also issued on this subject vide this Ministry's letter No. NHIII/P/15/75 dated the 20th May, 1976 to all the State Governments. I would, however, suggest that in future whenever any plantation of trees along roadsides is taken up it may preferably be confined to fruit-bearing trees at least in same lengths or rows. The Horticulture Department of your State will be able to advise you on the type of fruit trees which may be suitable for growing along roadsides in your State. Once the trees are ready to yield fruit, they may be leased out after appropriate competitive bidding, preferably to landless labour and other weaker sections of the society such as Schedule Castes and Tribes as may be admissible according to the present policy of the State Government.

702.5.

D.O. No. NHIII/P/15/75

Dated the 7th Sept., 1978

All State Chief Engineers
dealing with N. Hs (By name)

Subject : Landscaping along National Highways

Kindly refer to the D.O. letter of even number dated 24th June 1978, from the Union Minister for Shipping & Transport to the State P.W.D. Ministers, copy endorsed to you on the subject mentioned above. You will appreciate that the Monsoon season is the most appropriate for undertaking the plantation of new trees and it is hoped that you will make all possible efforts to take advantage of the current Monsoon season for planting of maximum number of fruit bearing trees along National Highways. It may also be added that in addition to the N. Hs, the possibility of planting the fruit bearing trees in the compounds of the Inspection Bungalows/Rest Houses and other similar Govt. buildings may also be explored. The expenditure on the plantation of new fruit trees along N. Hs and their maintenance may be met out of the funds allotted to the State Govts. for the maintenance and repairs of National Highways.

702.6.

No. NHIII/P/43/78

Dated the 2nd March, 1979

To

Chief Engineers of all State & Union Territories dealing with National Highways

Subject : Plantation of Trees on National Highways

This Ministry's circular No. NHIII-P/15/75 dated 20th May 1976, had spelt out the policy regarding the plantation, maintenance and cutting of trees along National Highways and had stressed the need for further augmenting the roadside avenue trees. Subsequently in June 1978, the Hon'ble Minister for Shipping & Transport had also personally written to the P.W.D. Ministers stressing the need for landscaping along NHs and suggested plantation of fruit-bearing trees. Recently the Ministry of Agriculture and Irrigation, alarmed at the dwindling forest resources in the country and resultant soil erosion, has proposed the undertaking of an intensive programme of tree plantation along highways with the help of the State Forest Departments under State schemes of extension forestry and economic plantations, as well as the Centrally sponsored social forestry programme. The proposal briefly is as under :—

- i) The Public Works Departments may make roadside land available to the concerned Forest Department, for taking up suitable plantation programmes and management of the afforested lands including their fencing etc.

- ii) State Forest Departments will declare the afforested areas as "Protected Areas" under Section 29 of Indian Forest Act, so that they have legal status to protect the plantations.
- iii) Forest Departments will be responsible for raising the nurseries, plantations, and after care of the plants.

2. In the Ministry's circular dated 20th May, 1976 referred to above, it was mentioned that where the plantation and maintenance of roadside trees on National Highways had been handed over to the State Forest Department, the Chief Engineer should communicate the contents of our circular to the Forest Department for compliance and maintain contact with them with regard to the planning and implementation of a proper roadside plantation programme through periodical reviews. Some State P.W.Ds have already entrusted the plantation of roadside trees to Forest Departments and their experience has been quite happy. The Forest Departments are well versed in this task and they also have powers for protection of such plantations. It may therefore, be advantageous to have a cooperative arrangement with them and get benefit of their expertise in raising of nurseries and plantation technology. An additional advantage would be that the Forest Departments will meet most of the extra cost involved from their own budgetary resources. No doubt there would be some difficulties of coordination and an agreed policy about the spacing etc of trees with respect to the road needs. With a view therefore to take a policy decision at the national level, I am to request you to kindly furnish the following information urgently to this Ministry :

- (i) How is the roadside plantation programme being managed in your State? Is it under the control of P.W.D. itself, and whether they have a separate staff set-up for this purpose?
- (ii) If the plantation responsibility has been handed over to the Forest Department, how are the plantations being financed, and whether the revenue from avenue trees is being credited to appropriate central head of account or not? Is the system working satisfactorily?
- (iii) Have any difficulties been encountered about the execution of road improvements involving afforested areas under the charge of Forest Departments? (For instance borrowing of earth, digging of roadside drains, cutting of trees to improve visibility etc).
- (iv) Has the P.W.D. been required to pay any compensation to the Forest Department for removal of trees in the NH land necessitated by road improvement works?
- (v) What are the views of the State P.W.D. about handing over the roadside land to the Forest Department for afforestation?

3. An immediate reply is requested as the matter is proposed to be discussed in detail at the next meeting of the Chief Engineers.

702.7.
4110

D.O. No. NH III/P/15/75

Dated the 8th June 1979

From the D.G. (RD) & Addl. Secy. to the Govt. of India and copy endorsed to Inspector General of Forests and Addl. Secy to Govt. of India

All State Chief Engineers dealing with National Highways (By name)

With rains fast approaching I will request you to review the need of landscaping and arboriculture and have the utmost done along the wanting and barren reaches of National Highways and in Rest Houses, Inspection Bungalows etc. meeting the cost from the funds available with you for maintenance and repairs of National Highways. Of course the landscaping-cum-arboriculture should be to this Ministry's guidelines bearing No. NHIII/P/15/75 dated the 20th May, 1976 with preference to fruit-trees as desired by the Union Minister of Shipping & Transport in his d.o. letter of even number dated the 24th June, 1978 to the State PWD Ministers with endorsements to you.

- 2. This request is practically the same as made last year in my D.O. letter of even number dated the 7th Sept. '78 (copy enclosed for ready reference).
- 3. In case arboriculture vests with the Forest Department, I request you take up the matter with the Chief Conservator for better and accelerated progress.
- 4. I may please be informed of the action taken and later on apprised every quarter of the progress.

No. NHIII/P/15/75

Dated 3rd August, 1979

To

1. All State & Union Territories Govts.
(dealing with National Highways)
2. Chief Engineers & Additional Chief Engineers of all State PWDs & Union Territories dealing with National Highways
3. Engineer-in-Chief, CPWD, New Delhi
4. Director General Border Roads, New Delhi

Subject : Plantation, maintenance and cutting of trees on National Highways

Please refer to this Ministry's detailed circular of even number dated 20.5.1976, on the subject cited above.

2. Certain difficulties in implementing these instructions have been brought to this Ministry's notice by Forest Department Officials. To remove these difficulties, it has been decided to amend the instructions earlier issued, to the extent given below :

- i) Location of trees — Though the first row of trees should be placed at a minimum distance of 10 to 12 metres from the centreline of the extreme traffic lane, the second row of trees may be placed closer than 6 metres depending upon the species of trees planted after obtaining the advice of forest officials. There shall be no limitation about the number of rows of trees to be planted beyond the first row.
- ii) While borrowing earth from the roadside land for normal maintenance of road, care should be exercised to see that excessive earth is not removed from around the roots of trees. This may cause ponding of water and ultimate uprooting of trees. In this connection the advice of Forest Department officials should be taken. Earth should be borrowed by scraping the surface uniformly to create a proper graded roadside area. Ugly deep pits should be avoided. Guidance given in IRC : 10-1961 "Recommended Practice for Borrow Pits for Road Embankment Constructed by Manual Operation" should also be kept in view.
- iii) Where available roadside land is inadequate for large scale plantation, at least one row of fruit bearing trees should be planted along the highway. In addition to this orchard type plantation might be done in local areas where more land is available as consequent to realignment, approaches to bridges, in the compounds of rest houses etc.
- iv) As far as possible, the trees planted should be fruit bearing.
- v) Rest areas and landscaped spots may also be developed at intervals along the route, especially in portions where roadside land is available due to change in alignment.

3. In cases where the roadside avenue tree plantation is handed over to the Forest Department, care should be taken that the existing row of trees are not felled before handing over. The Plantation programme in each state should be coordinated between the PWD and the Forest Department. The Chief Engineer and the Chief Conservator of Forest in each State should meet at least twice a year to discuss the budgeting and plantation programme. Through these meetings, it should be ensured that areas which are likely to be used for widening of roads within the next 10 years are not planted and other requirements of geometrics, sight distances, borrowing of earth etc. are kept in view while planning tree plantation. Normally the Forest Deptt. should be able to provide funds for tree plantation along the National Highways from their own budget, except in the initial stages when they have just taken over the work and provisions have not been made in their plan for this work. The understanding with the Forest Deptt. shall be that even though the entire cost of plantation will be borne by the Forest Deptt., the ownership of land will still remain with the National Highway Authority. They will also agree to remove any tree which obstructs the sight line or is otherwise required to be removed for any other reasons by the Chief Engineer of the State.

No. NH-III/P/15/75

Dated the 12 the June, 1981

To

1. All State & Union Territory Govts.
(dealing with National Highways)
2. Engineer-in-Chief, CPWD, New Delhi
3. Director General Border Roads, New Delhi

Subject : Banding of trees and delineation objects along National Highways

The Ministry had issued detailed instruction regarding plantation, maintenance and cutting of trees

on National Highways, vide circulars of even number dated 20th May, 1976 and 3rd August, 1979. These instructions, inter alia, stipulated that as trees located on the roadway or embankments slopes constitute a potential hazard to vehicles going off the carriageway and hitting against them, these should be replaced systematically by alternative plantation. While the State PWDs and other agencies would have initiated action on these lines, there may still be a number of trees falling under this category waiting for removal. Till such time these trees are removed and replaced by alternative plantation, it is necessary in the interest of traffic safety that their presence should be brought out prominently so that motorists take due care to avoid hitting them and getting involved in accidents. For this purpose, the following guidelines are suggested for implementation.

- (i) on straight sections, roadside trees falling within the roadway and the side slopes should be white washed upto a height of 1.5 m above the road level;
- (ii) on horizontal curves such trees as at (i) above should also be white washed upto a height of 1.5 m above the road level but in bands each 0.3 m high, with space between each 0.3 m height left blank to the natural colour of the tree or given dark colour wash.

2. In certain areas, empty bitumen drums or similar objects are used for delineating the roadway edges. Till such time a better delineation system is evolved, it is suggested that the drums and similar objects at the roadway edges be white/dark colour washed in equal alternate bands, each 0.3 m height.

3. It is requested that the contents of this circular may be brought to the notice of all concerned in your Department dealing with National Highways Work for implementation.

702.10.

LETTER NO. 7.11/82-FRY (P) DT. THE 1ST APRIL 1982 OF THE INSPECTOR GENERAL OF FORESTS, MINISTRY OF AGRICULTURE ADDRESSED TO SECY., BORDER ROAD DEVELOPMENT BOARD, D.G. OF WORKS, CPWD, SECRETARIES OF PWD OF ALL STATES

Subject: New 20-Point Programme

As you might be aware afforestation, social forestry and farm forestry are included in the new 20-point programme formulated by the Prime Minister. Planting of trees along the sides of roads is a part of the social forestry programme. In many States, the strips adjoining roads have been transferred to the forest departments for planting of trees and the work is already being carried out. However, in view of the new 20-point programme, it is necessary to ensure that all roadsides are planted with trees either by the forest department or by the public works departments or by the agency responsible for maintenance of the roads. This will apply to all types of roads viz. National Highways, State Highways, District roads and Village roads. Since, forest departments have the technical expertise regarding plantation of trees, it would be preferable if areas along the roads are transferred to forest departments for the purpose. However, where this is not feasible for some reason, planting should be done by the agencies which are in-charge of the roads. I therefore, request you to issue necessary instructions in the matter.

2. For the purpose of monitoring achievements under the new-20 point programme, it is necessary where planting is done by agencies other than the forest department, information about the number of trees planted by such agencies is given to the local divisional forest officer, as soon as the planting work is over.

702.11.

Government of India
Ministry of Agriculture
Department of Agriculture & Cooperation
New Delhi

No. 3-4/82-FRY(P)

Dated the 5th May, 1982

To

The Chief Conservators of Forests/Heads of Forest Departments
(All States & concerned U.Ts.)

Subject: Centrally Sponsored Social Forestry including Rural Fuelwood Plantations Scheme

While examining the cases for the release of Central assistance for the year 1981-82; it has been observed that the progress reports are not sent by the States/U.Ts in the prescribed proforma. It was possible to

obtain information about actual expenditure upto 31st December, 1981 and anticipated expenditure for the last quarter of the year only after repeated reminders, telegrams and telephone calls. Such a position creates difficulties in properly examining the individual cases and results in avoidable delays in release of funds.

The Inspector General of Forests had also emphasised in the meetings of the Sanctioning Committee and also during the Conference of Chief Conservators of Forests and Managing Directors of Forest Development Corporations held in New Delhi on 25th and 26th February, 1982 that the progress reports indicating physical and financial achievements should be sent to this Ministry in time so that timely release of Central assistance is ensured.

Another point that has been observed is that the major portion of the expenditure is incurred during the last quarter of financial year. This makes it difficult to convince the Internal Finance of the need to fully release the balance Central assistance earmarked. I would, therefore, also request you that to ensure right from the beginning of the financial year that the tempo of work is uniform throughout the year. This will also help to achieve the targets fully.

It is further requested that the proposals for 1982-83, under the scheme may be sent to this Ministry latest by 15th of May, 1982 so that administrative approval is issued in time. Please make sure that your proposal for 1982-83 is accompanied by the progress report for 1981-82 indicating physical and financial achievements without which it will not be possible for this Ministry to issue the administrative approval for 1982-83 and to release the first instalment of Central assistance. A proforma for indicating the physical/Financial achievements for 1981-82 is enclosed.

From 1982-83, a separate budget head for Tribal areas has been opened for the Grants to be released to the State/U.T Govts. under this scheme. Your proposals for 1982-83 should clearly indicate the programme of work to be undertaken in the general area and in the Tribal Sub-plan area separately so that funds to be released under the appropriate budget heads can be clearly indicated in the orders about release of funds.

An immediate action in the matter is requested.

PROGRESS REPORT 1981-82
CENTRALLY SPONSORED SOCIAL FORESTRY SCHEME "SOCIAL FORESTRY INCLUDING
RURAL FUEL-WOOD PLANTATIONS".

Amount — Rs in lakhs

Sl. No. Items		Unit	Physical		Financial (including Central assistance)	
			Programme approved	Achievements made	Amount Sanctioned	Amount spent
1	2	3	4	5	6	7

702.12

EXTRACTS OF PENAL CLAUSES FROM INDIAN
FORESTS ACT, 1927 — CHAPTER IX
PENALTY AND PROCEDURES (PAGE 31)

Penalty for counterfeiting or defacing marks on trees and timbers and for altering boundary marks.

- 63 Whoever, with intent to cause, damage or injury to the public or to any person or to cause wrongful gain as defined in the Indian Penal Code :
- (a) Knowingly counterfeiting upon any timber or standing tree a mark used by Forest Officers to indicate that such timber or tree is the property of the Government or of some person or that it may lawfully be cut or removed by some person; or
 - (b) Alters defaces or obliterates any such mark placed on a tree or on timber or under the authority of Forest Officer; or

	(c) Alters, moves, destroys or defaces any boundary-mark of any forest or waste-land to which the provisions of this Act are applied : Shall be punishable with imprisonment for a term which may extend to two years or with fine or with both.
Power to arrest without warrant	64 (1) Any Forest Officer or Police Officer may without orders from a Magistrate and without a warrant, arrest any person against whom a reasonable suspicion exists of his having been concerned in any forest offence with imprisonment for one month or upward (2) Every officer making an arrest under this Section shall without unnecessarily delay and subject to the provision of this Act as to release on bond, take or send the person arrested before the magistrate having jurisdiction in the case, or to the Officer incharge of the nearest police station. (3) Nothing in this section shall be deemed to authorise such arrest for any act which is an offence under Chapter IV unless such act has been prohibited under Clause (C) of Section 30.
Power to release on a bond a person arrested	65 Any Forest Officer of a rank not inferior to that of a Ranger who or whose subordinate has arrested any person under the provision of Section 64, may release such person on his executing a bond to appear if and when so required before the Magistrate having jurisdiction in the case or before the Officer Incharge of the nearest police station.
Power to prevent commission of offence	66 Every Forest Officer and Police Officer shall prevent and may interfere for the purpose of preventing the commission of any forest offence 67 The district magistrate or any magistrate of 1st class specially empowered in this behalf by the State Government may try summarily, under the code of Criminal Procedure 1898, any forest offence punishable with imprisonment for a term not exceeding 6 months or fine not exceeding Rs 500/- or both.

CHAPTER XII SUBSIDIARY RULES (PAGE 34)

Penalty for breach of rules	77 Any person contravening in Rule under this Act, for the contravention of which no special penalty is provided shall be punishable with imprisonment for a term which may extend to one month, or fine which may extend to Rs 500/- or both.
-----------------------------	--

(Collected from the compilation of **UNREPEALED** Central Acts, arranged under the subject in "The India Code Vol. IV" under Part XV — Forests available from the library of Economical and Statistical Data, Ministry of Agriculture, Ground Floor, Krishi Bhawan, New Delhi)

702.13.

D.O.No. NHVI-50(3)/83

Dated the 24th June 1983

To

1. Secretaries of all State PWDs (By name)
2. All C.Es. NHs (By name) including C.E., Pamban Bridge Project.

Subject : (i) Provision of flowering plants near bridges across rivers on N.Hs. and other Centrally-sponsored roads;
(ii) Proper location of store sheds

In order to make the surroundings of bridges on the N.Hs. and other Centrally sponsored roads congenial and scenic, I had requested in my inspections of some bridges the field officers accompanying me during my inspections to provide suitable flower bearing trees in the immediate approaches to the bridge. This could be easily done as water would be easily available nearby. Expenditure in this regard could be met from the provision for contingencies in the estimate of the particular bridge work.

2. It is requested that suitable instructions in this regard may kindly be issued to all the field Executive Engineers. The efforts of the officers who take adequate action in this regard may kindly be reflected in their records. Those officers who do not comply with the aforesaid instructions may kindly be viewed seriously.

3. Usually some provision is made in the estimates for major bridges for store sheds to cater for storage of materials, scientific instruments etc. during the course of construction of the bridge. It is requested that such store sheds may be located at proper places along the river so that one gets a very good scenic view of the bridge, river etc. from there. After the construction of the bridge, these store sheds could be conveniently utilised for stay of inspecting officers, if necessary.

703 ENVIRONMENTAL PROTECTION & SOIL CONSERVATION

<i>Code No.</i>	<i>Circular No. & Date</i>	<i>Brief Subject</i>	<i>Page No.</i>
703.1.	PL-50(13)/74-SP dt. 10.9.74	Special Steps to Prevent Soil Erosion in Hilly areas in the context of overall Soil Conservation Measures in the Country	703/1

No. PL-50(13)/74-SP

Dated the 10th September, 1974

To

**Chief Engineers of
all State Public Works Departments
and Union Territories dealing with roads**

Subject : Special steps to prevent soil erosion in hilly areas in the context of overall soil conservation measures in the country

The need to conserve and build the country's land and soil resources, so that these serve the present, as well as, future generations, has assumed paramount importance in the wake of developing shortage of tillable land and water resources. Unplanned road construction in hilly areas has been identified as one of the causes contributing to loss of these resources.

2. By its very nature, road construction in hills is a destructive process for the strata of the hill side, at least in the initial stages. Road cuttings through areas otherwise not susceptible to land slides normally disturb the natural inclination of the soil in such a way as to create conditions for large scale landslides in the first few years after construction. Even dense forests are not immune from this problem. With the removal of vegetative cover, destructive action of water gets further pronounced and accelerates the process of soil erosion and formation of deep gullies. End result of this is that enormous quantities of soil and rock move down the rivers, lakes and finally to the sea.

3. It is, therefore, necessary that utmost care is taken during road construction, as regards planning of works and treatment of the catchment area of drainage, so that soil erosion is prevented as far as possible. To combat this problem, the following measures are especially commended, for adoption on National Highways as well as State roads :-

- (i) Roads should not be located through geologically unstable strata if this can be avoided;
- (ii) Road alignments should avoid large scale cuttings and fillings, and follow the lie of the land as far as possible. Use of tunnels to avoid deep cuts should be considered where feasible as also economical;
- (iii) Where necessary provision of breast walls of suitable design should be considered to help achieve stability of the hill cuttings;
- (iv) To the extent feasible, roads should be aligned away from streams and torrents except where these are to be crossed. Since the greatest damage always occurs along water courses, special attention is necessary to create protection belts of forests on both sides;
- (v) Drainage of water from the roadside must be given top attention and necessary system of drains constructed to lead the runoff to natural water courses. In particular, suitable interceptor and catch water drains must be provided above the cut slopes for speedy and safe disposal of rain water;
- (vi) Excavated material should not be thrown haphazardly but dumped at suitable places where it cannot get easily washed away by rain. It is otherwise expected as a normal requirement of hill road design that the cross-section is either wholly in cutting, or partly in cutting and partly in filling, so that with the adoption of retaining walls of a suitable type the cutting spoils can be utilised to the extent possible, guided of course by considerations of economy and best road stability;
- (vii) Depending on the availability of land and other resources, afforestation of roadside land should be carried out to a sufficient distance on either side of the road. The selection of plant species will depend on climate, altitude and soil conditions, but preference should be given to deeprooted trees and plants. For preparing the detailed scheme of afforestation, persons having knowledge of soil conservation or forestry should desirably be associated;
- (viii) Vegetative cover should be established on all cut/fill slopes through any one of the techniques described in I.R.C. Standard "Treatment of Embankment Slopes for Erosion Control" (under print). The activity of establishing vegetation on barren slopes should be treated as part of the regular maintenance operations on all hill roads.

4. It is requested that necessary action may be taken on the above suggestions under intimation to this Ministry. This circular may please be brought to notice of all officers in your department engaged on road works in the hilly terrain, as also to other State institutions dealing with road construction such as Zilla Parshads, Rural Engineering Works Organisations, Forest Departments, Irrigation and Power Project Authorities, etc.