

PUBLIC WORKS DEPARTMENT

ADMINISTRATION REPORT

OF THE

HIGHWAYS DEPARTMENT

1953-54



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ADMINISTRATION REPORT OF THE HIGHWAYS DEPARTMENT, 1953-54

CHAPTER I.

GENERAL.

The year 1953-54 under review had perceived an important event in the history of the Madras State which altered its boundary on the appointed day of the 1st October 1953, when a separate State of Andhra comprising the former districts of Andhra area was formed and commenced its functioning separately for all matters connected therewith. The area of the Madras State was consequently diminished to thirteen districts comprising of the Tamil, Malayalam and Kanarese areas of the pre-partition period. The Highways Department continued to function as hitherto before and to maintain the several categories of roads and execute all works connected with the roads in these districts.

In consequence of the formation of Andhra State in the middle of the year 1953-54, the Administration Report of this Department for the year has been prepared in respect of the Residuary Madras State alone for the year 1953-54.

1. *Accomplishments.*—The works on all categories of roads, viz., National Highways, Provincial Highways, Major and certain other District Roads in charge of Government and the other District Roads and the balance of Major District Roads under District Boards were continued to be executed by the Highways Department; the expenditure on National Highways having been met from the allotment of funds provided by the Government of India. In pursuance of the policy of this department of forming more new roads and extending the mileage of improved surfacing of the existing roads, several roads running through both rural and urban areas or those subjected to heavy traffic were treated with appropriate surfacings, viz., cement concrete, surface dressing with pre-coated chips, etc.

By the close of the year 1953-54, the total mileage of Government roads including those formed and improved during the year was 8,626 miles and that under district board was 17,301 miles. The details of roads formed and improved during the year are given in Annexure 6.

Reference to the previous years' reports of this department would reveal that the department has been attending to increasing volume of work in every year and its activities have been greater, as indicated below by the figures of total expenditure on all Government and District Board works :—

Year.					Expenditure on Government roads and District Board roads and Non-road works.	
					RS. IN LAKHS.	
1946-47	..	..	..	..	375	Expenditure under the Composite State of Madras.
1947-48	..	..	..	..	437	
1948-49	..	..	..	..	627	
1949-50	..	..	..	..	751	
1950-51	..	..	..	..	808	
1951-52	..	..	..	..	881	(Residuary State only)
1952-53	..	..	..	..	987	
1953-54	..	..	..	..	487	

A brief summary of accomplishments of the department in 1953-54 is given below :—

Government Roads.—Twenty-seven miles were cement-concreted; 1,070 miles were black-topped and 44 bridges and culverts were constructed. Besides special repairs were carried out to the extent of Rs. 6.45 lakhs covering three works.

District Board Roads.—Ninety-four miles were black-topped; 376 miles were formed and 74 bridges, culverts and causeways were constructed. In addition, special repairs to the extent of Rs. 1.80 lakhs were done covering 26 works.

Divisionwise details of works completed during the year are given in Annexure 22 (ii) and 23 (ii) and the particulars of roads newly formed or provided with cement-concrete and black-top surfaces by different authorities are shown in the statement in Annexure 6.

2. **Expenditure.**—The particulars of final grant and actual expenditure incurred during the year 1953-54 in respect of Government and District Board works and a comparison with previous years' figures (worked out in respect of the Residuary State of Madras) are given below :—

Nature of works.	Final grant for 1953-54.	Expenditure, 1953-54.		Expenditure, 1952-53.	
		Amount.	Percentage of final expenditure to the final grant.	Amount.	Percentage of final expenditure to the final grant.
		(3)	(4)	(5)	(6)
		RS.	RS.	RS.	RS.
(1)	(2)	(3)	(4)	(5)	(6)
	IN LAKHS.	IN LAKHS.	IN LAKHS.	IN LAKHS.	IN LAKHS.
Government Roads—					
Capital works including Post-War Road Development.	70.48	65.48	92.91	91.32	108.71
Maintenance	197.92	265.53	134.16	252.45	111.11
	268.40	331.01	123.32	343.77	110.81
District Boards Roads—					
Capital works on roads including Post-War Road Development.	56.13	42.83	76.31	61.36	91.39
Maintenance	96.05	84.67	88.15	103.25	101.18
Non-road works	35.72	28.57	79.98	30.39	78.12
	187.90	156.07	83.06	195.00	93.73
Grand total ..	456.30	487.08	106.64	538.77	103.93

The expenditure on Government and District Board Road works classified under different categories of roads is given below :—

	Expenditure.	
	New constructions.	Maintenance.
	RS.	RS.
Government Roads—		
National Highways	14,38,808	47,64,401
Provincial Highways	21,81,843	56,93,826
Major District Roads	29,27,772	1,54,68,843
Other District Roads	— 94	1,98,612
Maintenance of avenues	..	4,12,937
Total ..	65,48,339	2,65,38,619

	Expenditure.	
	New constructions.	Maintenance.
	RS.	RS.
District Board Roads—		
Major District Roads	12,85,835	35,57,638
Other District Roads	7,45,786	26,02,868
Village Roads	22,51,581	21,82,681
Maintenance of Avenues	..	1,23,479
Total ..	42,83,202	84,66,666

The following statement shows the cost of establishment as percentage of expenditure of works during the year 1953-54 with corresponding figures for the previous years for comparison. The percentage cost furnished up to 1952-53 relates to the Composite Madras State :—

Year.	Expenditure on works inclusive of tools and plant.	Expenditure on establishment.	Percentage cost of establishment of working expenditure.
(1)	(2)	(3)	(4)
	RS.	RS.	
	IN LAKHS.	IN LAKHS.	
1946-47	351.71	36.10	10.3 *
1947-48	467.33	46.50	9.9 *
1948-49	670.21	46.58	6.9 *
1949-50	835.56	50.64	6.1 *
1950-51	958.84	49.94	5.2 *
1951-52	964.40	49.63	5.01 *
1952-53	1,074.84	48.00	4.46 *
1953-54	517.91	34.88	6.73 †

* Composite State of Madras.

† Residuary Madras State.

Out of the total establishment charges of Rs. 34.88 lakhs, a sum of Rs. 5,08,218 was recoverable from the Union Government towards the charges for works executed on National Highways and a sum of Rs. 8,80,300 was provisionally marked for being recovered from the district boards, in proportion to the expenditure incurred on district Board works. Therefore the net charge on the State on account of establishment was only Rs. 20,99,482.

3. **Up-keep.**—A general review concerning the upkeep of Government and District Board roads in the State is furnished below :—

Government Roads.—The maintenance grant sanctioned for the year 1953-54 was nearly 75 per cent of the minimum allotment required for the proper maintenance of roads. However, the various categories of roads in the State were maintained in a satisfactory condition with the available funds and by proper utilization.

District Board Roads.—During the year the district boards were able to allocate only an amount of Rs. 96.05 lakhs towards the maintenance of roads in their charge, which was quite inadequate when compared to the minimum requirement. In spite thereof, this Department was doing its best to maintain the roads as satisfactorily as possible.

Year after year, more new roads are being formed under district boards and their maintenance in a satisfactory condition is a great strain on the resources of the District Board in addition to the current maintenance of roads. Unless measures are devised to review and improve the financial position of the district boards it will reflect upon the unsatisfactory maintenance of the roads leading to public criticism.

SOME FACTS OF CONCERNING UPKEEPS.

The standard of maintenance of various categories of roads, viz., National Highways, Provincial Highways, Major District Roads and other District Roads was generally good with due reference to the allotment available for expenditure on these roads and with regard to the adverse seasonal conditions obtaining in certain divisions. Experience has shown that improved surfacing is desirable if traffic intensity exceeds 500 tons and is quite essential if it is above 1,000 tons per day. In order to meet this situation a special drive was made to increase in the mileage of black top surface particularly in built up areas, areas of acute water scarcity and other stretches of roads where water bound macadam was found uneconomical.

In general the condition of roads in the State considerably improved during the year.

CHAPTER II.

ORGANIZATION.

1. Administrative set-up.

This Department continued to function with one Chief Engineer in its charge. The Andhra State was formed on 1st October 1953 and the jurisdiction of the department was reduced to the Residuary area from that date. The Department functioned with 4 circles and 39 divisions till 1st October 1953 and with 2 circles and 20 divisions after that date. In G.O. No. 3927, P.W., dated 29th September 1953, Government fixed the set up of the department. The post sanctioned in the above Government Order for regional and district establishments were not classified as permanent and temporary till the end of the year and the matter was under correspondence. The strength of the various administrative and executive posts as on 31st March 1954 is given below:—

Chief Engineer (Highways)	..	..	1 (Permanent).
Superintending Engineers (Highways)	..	2	Do.
Divisional Engineers (Highways)	..	21	(including 1 permanent post of Deputy Chief Engineer).
Assistant Engineers (Highways)	..	91	[including 1 permanent post of Technical Assistant to Chief Engineer (Highways)].
Junior Engineers/Supervisors	..	..	373 (including 28 posts under National Extension Scheme and 12 post for panchayat works).
Mechanical Supervisors	..	..	25

Steps were taken beforehand to transfer to Andhra Areas such of the Andhra Officers working in non-Andhra area. One Superintending Engineer, 18 Divisional Engineers and 71 Assistant Engineers were allotted to Andhra

State in the category of Gazetted Officers. Besides, 5 non-Andhra Assistant Engineers continued in the Andhra State after the partition as transferred officers.

2. Chief Engineer (Highways) and his office.

Sri K. K. Nambiar, B.E., M.I.E. (Ind.), F.INST.H.E. (Eng.), M.I.MUN.E. (Eng.), M.A.M.SOC.C.E., continued as Chief Engineer (Highways) till the end of the year.

Sri K. Ramaswamy Reddy, B.E., M.A.M.SOC. C.E., M.I.H.E., continued as Deputy Chief Engineer (Highways) till the end of the year.

Sri V. S. Ramachandran, B.A., continued as Accounts Officer (Highways) till the end of the year.

Sri K. V. Krishna Iyer, B.A., continued as Deputy Accounts Officer (Highways), till 26th October 1953 from which date the post was abolished.

Sri J. M. Trehan continued as Engineer Liaison Officer till the end of the year.

Technical Assistants to the Chief Engineer (Highways).

Sri A. N. Damodaram Naidu, continued as Technical Assistant to the Chief Engineer (Highways) till 18th January 1954, afternoon. Sri E. P. Nataraja Iyer succeeded him on 13th February 1954, forenoon and continued as Technical Assistant till the end of the year.

Sri P. V. Raju, B.E., continued as Technical Assistant to the Chief Engineer (Highways) till 1st October 1953 except during the period of his leave from 18th May 1953, forenoon to 30th May 1953, afternoon and 27th August 1953, forenoon to 28th August 1953, afternoon.

Sri P. G. Nambiar, B.E., continued as Technical Assistant to the Chief Engineer (Highways) throughout the year in charge of the compilation of the Madras Highways Manual and Designs except during the period of his leave from 28th November 1953, forenoon to 10th January 1954, afternoon.

Sri C. V. Padmanabhan, B.Sc., B.E., also continued as Technical Assistant to Chief Engineer (Highways) throughout the year.

Sri R. L. Sreshta, B.E., also continued as Technical Assistant to Chief Engineer (Highways) throughout the year except during the period of his leave from 8th June 1953, forenoon to 19th June 1953, afternoon.

Service rules.—The special section formed in November 1951 to tackle the questions such as probation, seniority, confirmation, recruitment of personnel against vacancies of Supervisors' posts reserved for war service candidates, regularization of the appointments of overseers and draughtsmen, etc., was continued till 30th September 1953. After the Andhra State was established from 1st October 1953 the special staff was merged in the set up of this department in the Residuary State. During the year under report the seniority of Junior Engineers and Supervisors appointed regularly in the Madras Highways Engineering Subordinate Service numbering 389 (including those allotted to Andhra State) was fixed.

3. Superintending Engineers.

I Circle, Kakinada.

Sri M. N. Kamath, B.E., M.I.E. (Ind.), M., AM. SOC., C.E., continued till 17th July 1953 when succeeded by Sri N. Durani, B.Sc., B.E., M.I.E., (Ind.), who continued till the date of partition. From 1st October 1953, this circle is functioning in Andhra State.

II Circle, Madras.

Sri K. K. Nambiar, B.E., M.I.E. (Ind.), F. INST. H.E. (Eng.), M.I., MUN. E. (Eng.), M. AM. SOC. C.E., continued to be in direct charge of the circle till 1st October 1953. From 1st October 1953 this circle is functioning in Andhra State.

III Circle, Tiruchirappalli.

Sri N. Durrani, B.Sc., B.E., M.I.E. (Ind.), continued till 13th July 1953. Sri M. Balasubramaniam, B.E., Divisional (Highways), Tiruchy, was in charge of the circle from 13th July 1953, a.n. to 27th July 1953, a.n. when he was succeeded by Sri M. N. Kamath, B.E., M.I.E. (Ind.) M., AM., SOC., C.E., who continued till the end of the year.

IV Circle, Coimbatore.

Sri S. C. Nayak, M.I.E., (Ind.) continued till the end of the year.

4. Divisional Engineers.

The following list shows the divisional charges during the year :—

(1) North Arcot, Vellore.

Sri C. R. Munuswamy Naidu, 1st April 1953 to 11th May 1953.

Sri S. R. Naidu, B.E., A.M.I. (STRUCT) E., 11th May 1953 to 31st March 1954.

(2) Chingleput Division.

Sri G. S. Gnanaprakasam, B.E., 1st April 1953 to 31st March 1954.

(3) South Arcot Division, Cuddalore.

Sri A. R. Sivaswamy, 1st April 1953 to 31st March 1954.

(4) Salem South Division, Salem.

Sri M. A. Thirunavukarasu, B.A., C.E., 1st April to 10th October 1953, a.n.

Sri B. Krishnamurthy, B.A., B.E., 10th October 1953 to 16th November 1953, f.n.

Sri M. A. Thirunavukkarasu, B.A., C.E., 16th November 1953 to 12th December 1953.

Sri O. Sivasankaran, B.E., 12th December 1953 to 31st March 1954.

(5) Salem North Division, Krishnagiri.

Sri C. N. Thirupuvanam, 1st April 1953 to 31st March 1954.

(6) Tiruchirappalli Division, Tiruchirappalli.

Sri T. M. Veeraraghavan, B.E., A.M.I.E., 1st April to 16th May 1953, a.n.

Sri A. C. Veerasami Naidu, A.E. (in charge), 16th May to 24th May 1953, a.n.

Sri M. Balasubramaniam, B.E., 24th May 1953 to 31st March 1954.

(7) Tanjore East Division, Nagapattinam.

Sri M. Balasubramaniam, B.E., 1st April 1953 to 19th May 1953, f.n.

Sri T. M. Veeraraghavan, B.E., A.M.I.E., 19th May 1953, a.n. to 31st March 1954.

(8) Tanjore West Division, Tanjore.

Sri P. Narayanan, B.E., 1st April 1953 to 22nd April 1953, a.n.

Sri M. Balasubramaniam, B.E., 22nd April 1953 to 18th May 1953, f.n. (additional charge).

Sri C. R. Muniswamy Naidu, 18th May 1953 to 7th January 1954, a.n.

Sri H. Nataraja Sastrigal, B.E., 7th January 1954, a.n. to 31st March 1954, a.n.

(9) Tirunelveli Division, Tirunelveli.

Sri P. S. Sivaprakasam, B.E., A.M.I.E. (Ind.), 1st April 1953, to 31st March 1954.

(10) Ramanathapuram Division, Sivaganga.

Sri P. Sirajudeen, B.E., A.M.I.E. (Ind.), from 1st April 1953 to 31st March 1954.

(11) Madurai Division, Madurai.

Sri T. S. Kethara Mudaliar, C.E., 1st April 1953 to 31st March 1954.

(12) Coimbatore North Division, Erode.

Sri O. Sivasankara Mudaliar, B.E., 1st April to 21st September 1953, f.n.

Sri K. S. Krishnan, B.E., 21st September 1953, f.n. to 31st March 1954.

(13) Coimbatore South, Coimbatore.

Sri S. R. Nayudu, B.E., A.M.I. (Struct.) E., 1st April 1953 to 6th May 1953, f.n.

Sri G. S. Ganapathy, 6th May 1953 to 31st March 1954.

(14) The Nilgiris Division, Ootacamund.

Sri G. S. Ganapathy, 1st April 1953 to 30th April 1953.

Sri N. J. John, C.E., A.M.I.E., 30th April 1953 to 31st March 1954.

(15) Malabar North Division, Kozhikode.

Sri N. J. John, C.E., A.M.I.E., 1st April 1953 to 23rd April 1953, f.n.

Sri V. Govindaswami Pillai, B.E., 23rd April 1953 f.n. to 10th October 1953, f.n.

Sri M. U. Samitha, C.E., 10th October 1953, f.n. to 31st March 1954.

(16) Malabar South Division, Palghat.

Sri M. Kumaran, C.E., A.M.I.E., 1st April 1953 to 31st March 1954.

(17) South Kanara Division, Mangalore.

Sri M. Srikanta Srouty, B.E., 1st April 1953 to 31st March 1954.

(18) Transport and Machinery Division, Madras.

Sri K. Namasivayam, B.E., 1st April 1953 to 31st March 1954.

Special Divisions.

(1) Designs Division, Madras.

Sri P. R. Golikere, B.E., 1st April 1953 to 31st March 1954.

(2) Bharathapuzha Division.

Sri K. Srinivasan, B.E., 1st April 1953 to 31st July 1953. (Division closed on 1st August 1953.)

No new Division was formed during the year under review. The Barathapuzha Bridge Division which was formed on 8th May 1948 was closed on 1st August 1953, f.n.

5. Subdivisions.

The following special subdivisions formed during the previous years were closed during the year in question on the dates noted against each :—

Name of work.	Head quarters.	Date of formation.	Date of closing.
Bridges	Madras ..	8th July 1946, <i>f.n.</i>	30th September 1953, <i>a.n.</i>
Security measure works	Taliparamba ..	8th May 1948, <i>f.n.</i>	31st March 1954, <i>a.n.</i>
Payyaswami bridge works in South Kanara District	Kasargod ..	11th February 1950, <i>a.n.</i>	30th June 1953, <i>a.n.</i>
Forming a road from Elayangudy to Rajasingamangalam.	Paramakudy ..	12th November 1951, <i>f.n.</i>	15th August 1953, <i>a.n.</i>
Noyyal bridge works	Coimbatore ..	10th January 1952, <i>f.n.</i>	31st December 1953, <i>a.n.</i>
Cement concreting Tanjore-Trichy road	Trichy ..	19th May 1952, <i>f.n.</i>	17th April 1953, <i>a.n.</i>
Cement concreting M. 33/0 to 44/0 of Tenkasi-Madurai road ..	Rajapalayam ..	11th July 1952, <i>f.n.</i>	31st March 1954, <i>a.n.</i>
Cement concreting Cuddalore Chittoor road, Katpadi	Katpadi ..	3rd December 1952, <i>a.n.</i>	28th February 1954, <i>a.n.</i>

The Special Subdivisions noted below were formed during the year under report :—

Serial number and name of work.	Head quarters.	Date of formation.	Remarks.
1 Constructing submersible bridges on Bisley Ghat Road.	Uppinangady ..	7th August 1953, <i>f.n.</i>	
2 C.R.F. Works	Chingleput ..	29th August 1953, <i>f.n.</i>	
3 Do. Famine relief works ..	Trichy ..	25th September 1953, <i>f.n.</i>	
4 Do. Do.	Madurai ..	28th September 1953, <i>f.n.</i>	
5 Do. Do.	Palayamcottai.	6th October 1953, <i>f.n.</i>	
6 Do. Do.	Sivaganga ..	24th October 1953, <i>f.n.</i>	
7 Formation of road in Kolli Hills area	Namakkal ..	19th November 1953, <i>a.n.</i>	Closed on 19th May 1954, <i>a.n.</i>
8 Mannarghat to Chinnathadagam.	Coimbatore ..	30th November 1953, <i>f.n.</i>	Closed on 31st May 1954.
9 Bridge across Poochmegar river.	Mudabidri ..	24th December 1953, <i>f.n.</i>	
10 Causeway across Agniar river at M. 6/4 and 5 of Pattukottai-Arantangi road	Pattukottai ..	6th March 1954, <i>f.n.</i>	
11 Reconstructing the bridge at M. 1/1 of Merkanam-Tindivanam road.	Merkanam ..	15th March 1954, <i>f.n.</i>	
12 Stock verification work	Madras ..	7th November 1953, <i>f.n.</i>	

6. Junior Engineers and Supervisors.

The staff position in regard to the availability of technically qualified personnel had very much improved. Only passed B.Es. were appointed as temporary Junior Engineers in this Department during the year. In fact could be absorbed. No retired Supervisors were re-employed. As in the previous years, common staff attended to both Government and District Board works.

2. The Andhra State was formed from 1st October 1953. Steps were taken before hand to transfer to the Andhra areas such of the Andhra officers working in the mufassal districts of the Non-Andhra areas of the State. Eleven Non-Andhra Junior Engineers and Supervisors were retained in the Andhra areas after partition and they were treated as transferred officers. Surplus of Junior Engineers or Supervisors in view of the partition of the State did not arise in this Department.

3. Decision was reached on the appointment for each district of one Common Supervisor for purposes of all the panchayats in that District except in the case of the Nilgiris district. Accordingly 24 supervisors were spared from the Highways Department for appointment by the Inspector of Municipal Councils and Local Boards as Supervisors for Panchayat works during this year. After partition of the State, 12 of these 24 Supervisors were attached to the Residuary State.

4. Twenty-eight Junior Engineers and Supervisors of this Department were selected by Government for appointment as Supervisors-cum-Junior Engineers under the programme of the National Extension Service for intensive rural reconstruction works in the State and their services were accordingly spared to the Extension Service. Twelve Supervisors already attached to Rural Welfare Scheme were merged in the above new set up.

Statement I.

The following were the special sections formed during the previous years for the works noted against each and closed during the year on the dates noted against them :—

Name of division. (1)	Name of work. (2)	Date of formation. (3)	Date of closing. (4)
South Arcot ..	Cement concreting works Cuddalore-Chittoor road 10/0 to 17/0 (G.O. Ms. No. 1897, P.W., dated 2nd May 1952).	30th August 1952.	31st July 1953.
Tiruchirappalli ..	Cement concreting works Tanjore-Tiruchi road M. 28/5 to 33/6 (G.O. No. 1727, P.W., dated 21st April 1952).	14th April 1952 ..	14th April 1953.
Ramanathapuram.	Forming a road from Rajasingamangalam to Elayangudi (G.O. Ms. No. 2640, P.W., dated 30th June 1950).	21st August 1950 ..	14th July 1953.
Do.	Cement concreting works Tenkasi-Madurai road M. 33/0 to 39/0, & M. 39/0 to 44/0 (G.O. Ms. No. 2553 P.W., dated 13th June 1952 and G.O. No. 2506, P.W., dated 10th June 1953).	13th September & 1st September 1952.	31st March 1954.
Chingleput ..	Improvement to Madras-Mahabalipuram road, Tiruporur (G.O. Ms. No. 4514, P.W., dated 7th November 1952 and G.O. Ms. No. 17, dated 2nd January 1954).	20th November 1952.	31st March 1954.
Coimbatore ..	Cement concreting works Pollachi Manakari road M. 1/5 to 5/0. (G.O. Ms. No. 606, P.W., dated 15th February 1952 and G.O. Ms. No. 2344, P.W., dated 1st June 1953).	14th May 1952.	31 March 1954.

Name of division (1)	Name of the work. (2)	Date of formation. (3)	Date of closing. (4)
Coimbatore ..	Noyyal Bridge works (G.O. Ms. No. 4359, P.W., dated 25th October 1951 and G.O. Ms. No. 48, P.W., dated 5th January 1953).	1st October 1951 ..	31st December 1953.
Palghat ..	Cement concreting works—Madras-Calicut road (G.O. Ms. No. 1788, P.W., dated 24th April 1952).	21st May 1952 ..	20th May 1953.
Kozhikode ..	Cement concreting works—Tellicherry (G.O. Ms. No. 3974, P.W., dated 24th September 1952).	3rd November 1952.	6th August 1953.
	Kokkadi Bridge works (G.O. Ms. No. 2445, P.W., dated 6th June 1952).	10th December 1951.	30th June 1953.
South Kanara ..	Bridge work at M. 0/6 Vital Ka saccia road (G.O. Ms. No. 2260, P.W., dated 23rd May 1952 and G.O. Ms. No. 512, P.W., dated 13th February 1954).	1st October 1952 ..	31st March 1954.
	Bridge work on Agumbe road (G.O. Ms. No. 5129, P.W., dated 6th December 1952).	1st July 1953 ..	16th February 1954.

Statement II.

The Special sections noted below were formed during the year under report :—

Name of division. (1)	Name of work. (2)	Date of formation. (3)	Remarks. (4)
South Arcot ..	Reconstructing bridge at M. 1/1 of Merkanam Tindivanam road (G.O. Ms. No. 1978, P.W., dated 4th May 1953).	5th August 1953. ..	....
Tiruchirappalli	Famine Relief works (G.O. No. 3453, P.W., dated 20th August 1953).	Section (i) and (ii) .. 14th November 1953 and 7th February 1954 respectively.	....
Do.	Constructing a bridge across Noyyal at M. 27/1 of Kodumudi Erode road (G.O. No. 252, P.W., dated 21st January 1953).	26th April 1953 ..	....
Madurai ..	Famine Relief works (G.O. No. 2458, P.W., dated 14th July 1953).	Section (i) and (ii), 10th October 1953 and 1st January 1954 respectively.	....
Ramanathapuram.	Famine Relief works—Ramanathapuram ..	Section (i)—29th November 1953.	....
	Kamuthi	Section (ii)—2nd December 1953.	....
	Sivakasi	Section (iii)—8th February 1954.	....
	Constructing a causeway—(1) at M. 19/7 Devakottai-Devipatnam road.	4th June 1953 ..	....
	(2) at M. 27/6 to 32/2 (G.O. Ms. No. 2199, P.W., dated 20th May 1953).	9th August 1953 ..	Closed on 31st March 1954.

Name of division. (1)	Name of work. (2)	Date of formation. (3)	Remark. (4)
Tirunelveli ..	Famine Relief works— (i) Sankarankoil	24th July 1953 ..	Closed on 7th April 1954.
	(ii) Nanguneri	1st September 1953.	Closed on 28th February 1954.
	(iii) Vilathikulam	11th September 1953.	10th March 1954 (closed.)
	(G.O. No. 3108, P.W., dated 25th July 1953.)		
Do.	Low-scale test works— Vilathikulam	13th September 1953.	31st March 1954 (closed.)
	Chettikulam	16th September 1953.	15th March 1954. (closed.)
	Nanguneri	5th October 1953 ..	Do.
	(G.O. Ms. No. 3180, P.W., dated 29th July 1953.)		
Do.	C.R.F. Works— Koilpatti	15th October 1953.	....
	Sattangulam	19th March 1954.	....
	Sankarankoil	14th September 1953.	....
	(G.O. No. 3453, P.W., dated 20th August 1953.)		
Chingleput ..	(i) C.R.F. Works— Palar Causeway (G.O. No. 2870, P.W., dated 7th July 1953.)	5th August 1953 ..	....
	(ii) Cheyyar Causeway work.	29th December 1953.	31st March 1954 (closed.)
	(iii) Vallipuram Causeway ..	1st October 1953.	....
Salem ..	Bridge works— Namakkal-Pavitrnam road (G.O. Ms. No. 1115, P.W., dated 14th March 1953.)	24th April 1953 ..	....
Coimbatore ..	Formation of road from Chinnathadagam to Mannarghat (G.O. Ms. No. 4181, P.W., dated 29th October 1953.)	29th October 1953.	30th December 1953.
	Do.	....	1st January 1954.
Salem ..	Kolli Hills road (G.O. Ms. No. 3450, P.W., dated 20th August 1953 and G.O. Ms. No. 770, P.W., dated 11th March 1954.)	....	24th December 1953.
Kozhikode ..	Special Section Mahe works (G.O. Ms. No. 1029, P.W., dated 25th March 1954.)	....	16th March 1954.
South Kanara ..	Mattai Bridge works (G.O. Ms. No. 668, P.W., dated 17th February 1952.)	....	20th July 1953.
Do.	Uppinangadi Bridge work (G.O. Ms. No. 2705, P.W., dated 25th June 1953.)	....	25th August 1953.
Do.	Uppinangadi Bridge work II (G.O. Ms. No. 2705, P.W.D., dated 25th June 1953.)	....	25th January 1954.
Do.	Poochmogar Bridge work (G.O. Ms. No. 3800, P.W., dated 18th September 1953).	....	16th January 1954.
Do.	Puttige Bridge work (G.O. Ms. No. 1318, P.W., dated 26th March 1953 and G.O. Ms. No. 1381, P.W., dated 19th April 1954.	....	1st April 1953.

CHAPTER III.

WORKS.

1. *General.*

There were 15,650 miles of Government roads and 25,838 miles of district board roads at the commencement of the year 1953-54, i.e., 1st April 1953. Besides the regular maintenance of these roads, 27 miles were cement-concreted, 1,164 miles were black-topped, 447 miles metalled and 381 miles were formed under Government and district boards during the year 1953-54. Details of roads improved and newly formed are given in Annexure 6. The position of various types of roads as on 31st March 1954, is indicated hereunder;—

	Government.	District Board.
	MILES.	MILES.
Cement-concrete roads	244	..
Black-top roads	3,096	179
Metalled roads	5,205	7,904
Unmetalled roads	80	9,351
Total ..	8,625	17,434*

* The figure 17,434 includes 132 miles referred to in note to Annexure 4.

2. *Maintenance.*

The expenditure on maintenance of Government and district board roads compared with five preceding years is given below:—

Year.	Government roads.	District Boards roads.
	RS.	RS.
<i>Composite State of Madras.</i>		
1948-49	3,50,15,182	1,15,83,288
1949-50	3,37,91,000	1,29,85,735
1950-51	3,87,73,748	1,33,63,439
1951-52	4,16,35,671	1,41,82,154
1952-53	4,51,29,912	1,45,39,379
<i>Residuary Madras State.</i>		
1953-54	2,61,25,682	83,43,187

The division-wise details of expenditure on the maintenance of Government and district board roads during the year 1953-54 are given in Annexure 11 (i) and (ii).

Cost per mile.—The average cost of maintenance per mile without regard to type of road surface for the past years and for the year under report, is furnished in Annexure 2 and a comparison of average maintenance cost during the few years immediately preceding is as hereunder:—

Year.	Average maintenance cost per year.
	RS.
<i>Composite State of Madras.</i>	
1949-50	1,229
1950-51	1,338
1951-52	1,376
1952-53	1,438
<i>Residuary Madras State.</i>	
1953-54	1,330

The rise in cost of maintenance was mainly due to the increased tempo of maintenance work dictated by the needs of the more complex traffic with a large number and variety of vehicles, higher speeds and heavier loads. Hence the cost of maintenance cuts deeper into the highway budget year after year and the necessity for improved surfacing to meet the traffic requirements with less recurring cost was being felt to a great extent.

The divisionwise classification of maintenance expenditure according to categories of roads is given in Annexure 13 and an abstract for the State worked out in Annexure 3. This average cost of maintenance per mile of various categories of roads without regard to the type of surface is rendered below:—

	Average cost of maintenance.
	RS.
<i>Government roads.</i>	
National Highways	4,474
Provincial Highways	3,448
Major district roads	2,654
Other district roads	2,283
<i>District Board roads.</i>	
Major district roads	1,071
Other district roads	515
Village roads	245

The figures give a broad indication of the relative standards of the different categories of roads. The large disparity between the standards of the Government roads and the District Board roads is also an indication of the relative inadequacy of available funds on District Board side.

Cost per ton-mile.—The cost of maintenance per ton-mile of traffic for a few roads taken at random is given below:—

Serial number and classification of road.	Name of road.	Reach miles.	Type of surface.	Maximum intensity of traffic (tons per hour).	Maintenance expenditure.		Cost of maintenance per ton-mile.	RS. A. P.
					Length in miles.	Cost.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
GOVERNMENT ROADS.								
1 National Highways ..	Benares-Cape Comorin road ..	324/7—356/1	....	2,264	31—0—0	94,747	1 5 7	
2 Provincial Highways.	Madurai-Ramanathapuram road ..	6/5—70/5	....	950	64—0—0	2,01,821	3 5 1	
3 Do.	Manamadurai-Tirupattur road ..	0/1—39/5	....	732	39—4—0	1,38,979	4 12 11	
4 Do.	Tenkasi-Madurai road ..	33/1—64/1	....	2,500	31—0—0	78,085	1 0 0	
5 Major district roads.	Virudunagar-Aruppukottai road ..	0/1—10/4	....	2,688	10—4—0	37,942	1 5 6	
6 Do.	Sankarankoil-Rajapalayam road ..	46/7—53/3	....	1,050	7—4—0	25,781	3 4 4	
7 Do.	Elayangudi-Emaneswaram road ..	20/0—25/0	....	980	5—0—0	3,048	0 9 11	
8 Do.	Madurai-Devakottai road ..	52—57	C.C.	1,362	5—0—0	1,242	0 2 11	
9 Do.	Do.	28/4—32/0	W.B.M.	558	3—4—0	7,648	3 14 8	
0 Do.	Manamadurai-Tirupattur road ..	5 miles.	W.B.M.	1,090	5—0—0	16,150	2 15 5	

Black-topping in built-up areas—During the year, the policy of black-topping built-up areas was pursued and thus several roads radiating from town limits subjected to heavy traffic were provided with improved surfacing with pre-coated chips.

National Highways.—During the year, a final grant of Rs 40.40 lakhs was sanctioned by the Union Government for the maintenance of National Highways in the Residuary Madras State inclusive of allotment for special and unavoidable repairs, flood damages and the agency charges of 10 per cent, and an amount of Rs. 20.11 lakhs towards the actual expenditure incurred up to 30th September 1953 in respect of National Highways lying in Andhra area. Against the allotment of Rs. 40.40 lakhs, the actual expenditure incurred was Rs. 47.64 lakhs, the excess expenditure having been met initially from State funds pending recovery later on from the Central funds. Though the expenditure had to be restricted to the allotment available, the actual expenditure exceeded the limit as the condition of the National Highways in certain districts warranted much attention.

3. Capital Works.

The bulk of all works of improvements to roads such as providing improved surfacing to suit traffic needs, forming new roads, and constructing and reconstructing bridges and culverts, was being done under the National Plan. The rest of the works was executed under Central Road Fund and Grants-in-aid to local bodies under "Excluding Post-war Reconstruction." A brief summary of the schemes is furnished below;—

(a) *The Five-Year Plan.*—The Planning Commission suggested the formulation of the Five-Year Plan in two stages, the first two years beginning with 1951-52 and the second of three years in continuation thereof. Accordingly, the year 1953-54 was the commencement of the second stage of the three years.

Under this scheme of five years, the composite State of Madras had an allocation of Rs. 5 crores under "Roads" with the following provisions:—

	RUPEES IN LAKHS.					
State roads ..	..	..	..	..	..	245.45
Other roads ..	..	..	..	..	..	130.00
Tools and plant ..	..	..	..	..	..	124.55
Total ..	..	..	..	..	..	500.00

Since the districts in Andhra area have now separated and are functioning under a different Government with effect from 1st October 1953, the net allocation for the Residuary Madras State was Rs. 251.64 lakhs and a scheme was prepared with the following provisions:—

	RS.					
State Highways ..	..	..	..	..	..	119.30
Other roads ..	..	..	..	..	..	62.79
Tools and plant ..	..	..	..	..	..	69.55
	..	..	..	..	..	251.64

During the year under report, an expenditure of Rs. 36.27 lakhs was incurred on State Roads and Rs. 15.88 lakhs on other roads.

The provisions under other roads made in the Five-Year Plan was for the assistance that the State Government would give to the District Boards as Grants-in-aid under Post-war Road Development

During the year, Government sanctioned full grants to the extent of value of work done, to the District Boards North Arcot, Chingleput, South Kanara, Malabar, the Nilgris, Ramanathapuram, Salem and Tiruchirappalli in view of their depleted financial condition and half grants to District Boards Coimbatore, South Arcot, Madurai, Tirunelveli and Tanjore for the execution of District Board portion of the above plan.

In respect of National Highways, the Government of India sanctioned a final allotment of Rs. 30,79,800 inclusive of agency charges under original works; Rs. 15,50,410 for the Residuary Madras State and Rs. 15,29,390 towards expenditure incurred upto 30th September 1953 in respect of Andhra districts. Against the allotment for the State, an amount of Rs. 22,27,992 was incurred.

Technical approval and financial sanction to the following original works were also accorded by the Union Government:—

Name of work.	Estimate Cost RS.
(1) Widening and black-topping M. 29/0 to 33/0 of Madras-Calcutta Road. N.H. 5. Job No. 860 MD5 ..	1,58,900
(2) Reconstructing the bridge at M. 66/6 of Madurai-Ramanathapuram road, N.H. 49. Job No. 201 MD 49 ..	2,66,900
(3) Black-topping M. 231/1 and 500 to 236/5 of National Highway 47. Job No. 819 MD 47	2,20,700
(4) Formation of a by-pass road at M. 10/6 of Karur-Pugalur Road. Job No. 765 MD 7	28,500

The Government of India in their letter No. WIV-3 (15)/53, dated 22nd January 1954, communicated in Government Memorandum No. 40790 A/53-19, dated 18th March 1954, approved the scheme for the development of the Bombay Cape Comorin Road in the West Coast in Madras State. The scheme includes 89 works of which 25 are bridge works and 64 road works (including construction and reconstruction of culverts). Out of these works, 4 bridge works and 3 road works were completed during the year under reference and 5 bridge works and one road work were in progress. The remaining works are proposed to be taken up for execution during 1954-55. The rough cost of these 89 works comes to Rs. 178.86 lakhs. Government of India have agreed to meet half the cost of the scheme. All these works are expected to be completed by the end of 1955-56.

(b) *Central Road Fund Schemes*.—During the year, this State had an allocation of Rs. 45 lakhs bringing the total allotment under this scheme to Rs. 457.91 lakhs. An expenditure of Rs. 36.21 lakhs during the year and Rs. 347.49 lakhs to end of the year was incurred on both Government and District Board roads.

A statement showing the expenditure incurred during the past five years is given below:—

Year.	Expenditure incurred on		Total.
	Government works. RS.	District Board works. RS.	
1949-50	13,28,516	1,75,659	15,04,176
1950-51	16,65,665	5,88,866	22,54,531
1951-52	16,84,817	9,70,782	26,55,599
1952-53	49,96,227	15,08,853	65,05,080
1953-54	20,14,861	15,06,139	36,21,000

In G.O. Ms. No. 4121, P.W., dated 11th October 1951, approval of Government of India to a list of works under Road Development Programme, estimated at Rs. 81 lakhs was communicated. Out of several works sanctioned under this Programme in respect of Residuary State, Madras, approval to the particulars of sanctioned estimates of all the works excepting two works was accorded during the year by the Union Government.

(1) *New Scheme.*

The Government of India intimated that a sum of Rs. 142 lakhs would be available under "free balance" in the State's allocation from the Central Road Fund for the period ending with March 1956. Against this, the State Government was permitted to meet the non-recurring expenditure of about Rs. 10 lakhs involved in setting up of a Highways Research Station at Madras and an amount of Rs. 63 lakhs towards the State's share for the improvements of West-Coast Road. For the balance available, a scheme consisting of 43 works costing Rs. 66 lakhs (keeping an amount of Rs. 3 lakhs under reserve) was prepared and recommended to Government of India for their approval.

(2) *Central Road Fund Reserve.*

In order to mitigate the distress conditions in the districts of Ramanathapuram, Tirunelveli, Madurai and a part of Tiruchirappalli district, a programme containing 49 works at a total of Rs. 20.10 lakhs was drawn up and got approved by the Government of India who agreed to meet 50 per cent of the cost from the Central Road Fund Reserve and the other half being met out of the State Funds. In respect of most of these works, financial sanction and technical approval were sought for and they were awaited from the Union Government. An amount of Rs. 1,13,470 was incurred during the year, under this scheme owing to the scarcity conditions that prevailed in certain areas.

(c) *Grants-in-aid to Local Bodies under "Excluding Post-war Reconstruction"*.—Grants are allocated to district boards by the State Government under "Ex. Post-war Reconstruction Grants-in-aid". Small works which do not come under the scope of Post-war Road Development and are considered essential to local needs, are given aid by the Government for their execution under the following categories:—

- (1) Village communications other than Post-war Reconstruction.
- (2) Roads and bridges other than village communications.
- (3) Improved surfacing of roads, and
- (4) Flood damage to roads.

Government have also been sanctioning grants for unemployment relief works necessitated by the adverse seasonal conditions, famine, etc., on the recommendations of the District Collectors concerned.

Grants thus sanctioned by Government and expenditure incurred thereon are given in the statement below in respect of the sub-heads mentioned above:—

Sub-head.	Accounts, 1952-53. RS.	Revised estimate, 1953-54. RS.
(1) Village communications other than Post-war Reconstructions.	(2) 5,21,517	(3) 89,000
(2) Roads and bridges other than village communications.	89,401	1,07,000
(3) Improved surfacing of roads	5,84,579	46,700
(4) Flood damage to roads	23,760	..
(5) Special grant for road works to relieve unemployment due to failure of monsoon.	34,92,492	1,77,000

NOTE.—Figures in column (3) are for the second six months of 1953-54.

Capital Expenditure.

The total expenditure on all capital works during the year and the preceding years is furnished below:—

Year.	Expenditure on Government roads. RS.	Expenditure on District Board roads. RS.
1946-47	45,66,518	14,58,197
1947-48	33,49,405	60,22,963
1948-49	48,33,513	88,56,910
1949-50	1,45,34,000	1,00,97,570
1950-51	1,63,21,126	1,12,85,991
1951-52	1,56,13,516	1,18,63,708
1952-53	1,87,25,611	1,49,31,492
1953-54	65,48,329	42,83,202

Note.—Figures against 1953-54 relate to Madras Residuary State alone.

Division-wise particulars of expenditure are given in Annexure 11 (i) and (ii) and the expenditure classified under the different categories of roads in respect of each division is shown in Annexure 13.

Works completed.

A summary of new constructions and improvements completed during the year is given below:—

(a) Government Works.

Upgrading.—Fifty works at a total cost of Rs. 32,29,154 were completed during the year by which 27 miles were cement concreted and 1,070 miles were black-topped.

Bridges and culverts.—Seven major bridge works costing Rs. 40,29,063 and thirty-seven minor bridges, culverts and causeways to a total cost of Rs. 6,83,457 were completed during the year. The details are shown in Annexure 22 (ii) and 23 (ii), respectively.

Improvements and special repairs.—Three works costing Rs. 6,45,305 were completed during the year.

(b) District Board Works.

Upgrading.—Eight works to a total cost of Rs. 18,113 were completed.

Bridges and culverts.—One major bridge and seventy-three minor bridges and culverts to a total cost of Rs. 7,88,716 were completed during the year.

New formations.—One hundred and twenty-six works to a total cost of Rs. 11,52,599 were completed involving the formation of 376 miles of new roads.

Improvements and special repairs.—Twenty-six works costing Rs. 1,80,139 were completed.

Works in Progress.

An abstract of the number and estimated cost of works that were under execution by the Department during the year is furnished below:—

(a) Government Works.

Name of work.	Number.	Cost. RS.
Works costing over rupees one lakh each—		
Cement concrete and black-top works ..	9	36,67,700
Bridges, culverts and causeways ..	23	1,04,82,900
New formations	4	31,28,000
Improvements and special repairs ..	3	5,87,000

Works costing less than rupees one lakh each—

Cement concrete and black-top ..	29	11,80,180
Bridges, culverts and causeways ..	58	9,48,350
New formations	1	99,000
Improvements and special repairs ..	6	44,000

(b) District Board Roads.

Works costing over rupees one lakh each—

Cement concrete and black-top ..	..	..
Bridges, culverts and causeways ..	9	22,07,900
New formations	8	16,91,400
Improvements and special repairs ..	..	..

Works costing less than rupees one lakh each—

Cement concrete and black-top ..	34	3,42,760
Bridges, culverts and causeways ..	92	24,05,130
New formations	351	62,13,160
Improvements and special repairs ..	94	11,85,350

A detailed review of works costing over rupees one lakh each is given in Annexure 22 (i), and division-wise figures of works costing less than one lakh rupees each are furnished in Annexure 23 (i).

A BRIEF SUMMARY OF THE IMPORTANT WORKS UNDER EXECUTION.

A large number of works such as construction of major bridges, improvements to roads, etc., has been taken up on all categories of roads since the commencement of Post-war Road Development Programme in 1947 and National Plan in 1951; of these, certain works were under execution

some were completed, and certain new works were also taken up during the year. A brief summary covering the progress of a few important works is given below :—

(a) Bridge works.

Constructing a bridge across Palar at M. 38.5 of Great Southern Trunk Road—National Highway 45—Estimate Rs. 25,00,000—Chingleput Division.—The bridge is the first prestressed concrete highway bridge in India and the work was in progress. It consists of 22 piers and 23 spans, of which 15 piers were completed and 9 spans of prestressed concrete superstructure were laid. In respect of the remaining seven piers, well sinking was in progress. Approach roads were also formed and culverts completed. A total expenditure of Rs. 15,77,044 was incurred to end of the year.

Constructing the bridge across Coleroon at Anaikaran Chatram—Estimate Rs. 28,50,000—Coleroon bridge division, Sirkali.—This is an important bridge connecting the two districts of Tanjore and South Arcot and the work was in progress. Balance of concrete steining, sinking and plugging operations to wells were completed and capping slab over wells in South abutment was laid during the year. Levels for brick work and designs for pier cap and precast bearing block were finalized to suit the new type of prestressed concrete superstructure.

Construction of the Shirur bridge at mile 79/7 of Mangalore-Baindur Road—Revised, Estimate Rs. 1,46,000.—The bridge was completed during this year and opened for traffic. The bridge has nine spans each 15 feet. with a roadway of 22 feet wide. The total length of the road is 164 feet. The expenditure incurred so far on this work was Rs. 1,17,509. The bridge lies on the proposed National Highways under the West-Coast Development Scheme—Bombay to Cape Comorin road. The expenditure during the year was Rs. 37,478.

Constructing the bridge over Payaswamy river at Thekkil—Estimate, Rs. 10,10,000.—This bridge consist of five spans of 100 feet and two spans of 30 feet. The total length of the bridge is 791 feet and bridge carries a 22 feet wide clear roadway and this was completed and opened for traffic on 20th October 1953 by the Minister for Finance. This is one among the largest bridges on the proposed National Highway Scheme connecting North Malabar with South Kanara. The expenditure on the work during the year was Rs. 78,965. The total upto date expenditure on the work was Rs. 10,49,084. The total quantity of cement and steel used for the work was as follows :—

Cement : 800 tons. Steel : 245 tons.

Reconstructing the Poochmugar bridge at mile 5/5 of Mudabidri-Buntwal Road sanctioned in G.O. No. 1354, Public works, dated 20th April 1948 and G.O. 1813, Public Works, dated 10th May 1950—Estimate, Rs. 4,40,000.—This bridge consists of six spans each of 90 feet length. The total length of the bridge when completed will be 638 feet 6 inches with a roadway width of 22 feet. This is another long bridge lying on the proposed Cape Comorin-Bombay Road, National Highway Extension Scheme. The expenditure on the work during the year was Rs. 1,44,897. The total expenditure up to date was Rs. 1,51,284.

Constructing a bridge over Nileskwar river at mile 50/2 of Kanhangad-Cheruvathur Road—Estimate, Rs. 3,62,000.—This bridge consists of two spans of 35 feet each and two spans of 80 feet and one span of 100 feet and when completed the length of the bridge will be 330 feet with a

roadway of 22 feet wide. This work was now in progress. The expenditure on the work during the year was Rs. 1,46,744. The up-to-date expenditure was Rs. 1,48,144.

This also lies on the proposed National Highways roads in the Bombay-Cape Comorin road.

Reconstructing the Kallakkatta bridge at mile 0/6 of Vittal-Kabacca Road—Sanctioned in G.O. No. 1354, Public Works, dated 20th April 1948 and G.O. No. 1363, Public Works, dated 11th August 1951—Estimate, Rs. 1,38,000.—This bridge consists of two end spans of 30 feet 6 inches and one span of 35 feet 6 inches with a total length of 127 feet 6 inches carrying a roadway of 22 feet wide. The main structure of the bridge was completed during this year except the approaches and the expenditure on the work during this year was Rs. 47,174. The total up-to-date expenditure on the work was Rs. 87,848.

Constructing a bridge across Swarnanadhi at Puttige at mile 13/1 of Heriadka-Hebri Road—Sanctioned in G.O. No. 1510, Public Works, dated 28th April 1949—Estimate, Rs. 6,30,000.—The bridge consists of seven spans of each 60 feet length. The total length of the bridge is 456 feet between abutments. The main structure of the bridge has been completed except the approach road. The bridge when completed will afford a shortest route from Udipi to Shimoga connecting Mysore Frontier. The expenditure on the works during the year was Rs. 2,02,082. The total up-to-date expenditure was Rs. 4,98,880.

The total quantity of cement and steel used for the work is as follows :—

Cement . . . 660 tons. Steel . . . 140 tons.

Reconstructing the Kalamady bridge at mile 0/4 of Malpe-Udipi Road—Sanctioned in G.O. No. 1902, Public Works, dated 25th May 1949—Estimate, Rs. 1,80,000.—Well sinking in all the piers was in progress and the work was only at the early stage. This bridge connects Udipi the second important town of the district with the Port at Malpe.

The expenditure on the work during the year was Rs. 72,209. The total up-to-date expenditure was Rs. 1,29,561.

Constructing a bridge at mile 52/8 of Mangalore-Agumbe Road—Sanctioned in G.O. No. 2804, Public Works, dated 26th July 1949—Estimate Rs. 96,000—Revised Estimate, Rs. 1,10,000.—The work was completed and the bridge was opened for traffic by the Minister for Public Health during the year under report. The bridge consists of three spans each of 40 feet. The total quantity of cement and steel used for the work was as follows :—

Cement . . . 103 tons. Steel . . . 32 tons.

The expenditure on the work during the year was Rs. 54,523 and the total up-to-date expenditure was Rs. 1,17,017.

Reconstructing the bridge at Mile 62/2 of Calicut-Mysore Frontier Road—Estimate, Rs. 80,000.—This is a single span bridge of 30 feet R.C.T. beam-cum-slab. Masonry for Mysore side abutment and wings was completed and masonry for Calicut side abutment had come up to level 55 feet. Concrete for the wings was laid and two courses of masonry also laid. An expenditure Rs. 25,362 was incurred during the year.

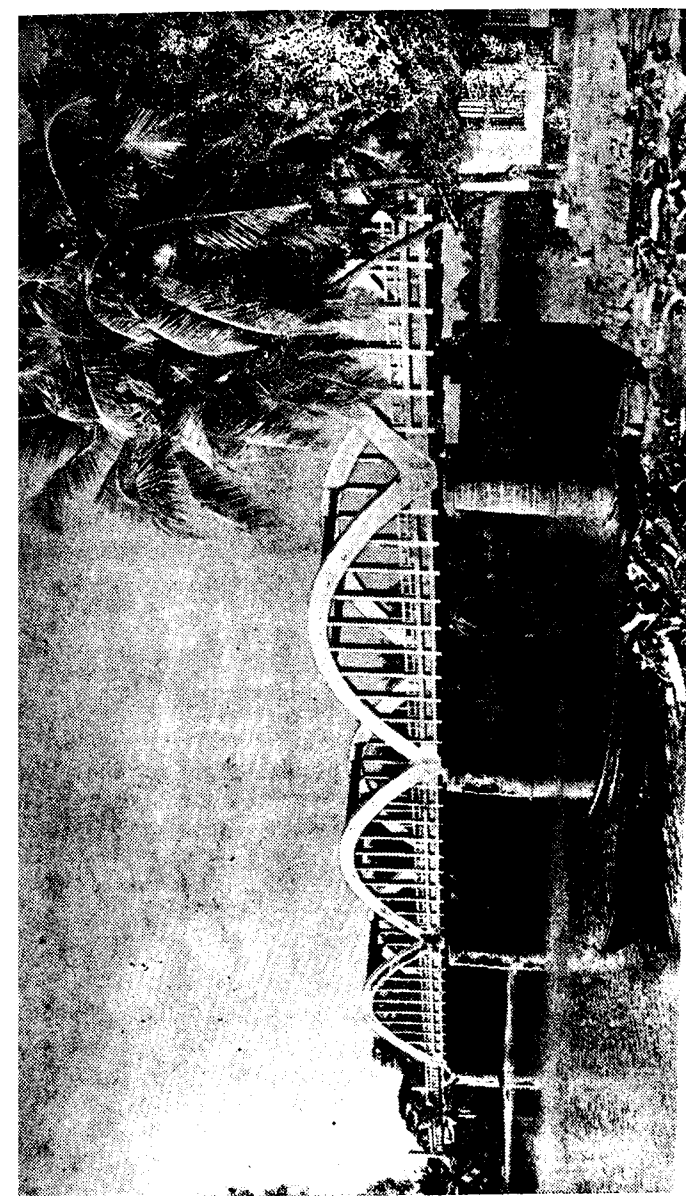
Reconstructing the bridge at Mile 66/7 of Calicut-Mysore Frontier Road—Estimate, Rs. 1,69,000.—This is a continuous slab bridge of three spans of 28.5 feet, 33.5 feet and 28.5 feet on well foundations. The Calicut side abutment wells were sunk to R.L. 54.00, Calicut piers wells to R.L. 58.00, Mysore side pier well to R.L. 58.00 and Mysore side abutments well R.L. 53.00. For both the abutments wells rock was not met with at the levels R.L. 57.00 shown in the plan. Further sinking of wells and earth work for the approaches was in progress. An expenditure of Rs. 56,579 was incurred on this work.

Cement concreting Tenkasi-Madurai Road Mile 33 to 44—Estimate, Rs. 9.75 lakhs,—Ramanathapuram Division.—The existing metalled width of 12 feet was widened to 24 feet and the widened portion was given a foundation of 6 inches thick soling and 3 inches thick metalling with 2 inches I.R.C. size metal. After the widening was ironed by traffic the sub-grade was renewed for 18 feet width with 1½ inches size granite metal and the rest width 2 inches size metal for 2 inches thickness and the concrete pavement was laid to 18 feet width with 4 inches thickness. Total expenditure of Rs. 9,65,913 was incurred to end of 1953-54, the expenditure during the year being Rs. 5,26,026. The work was completed on 31st March 1954.

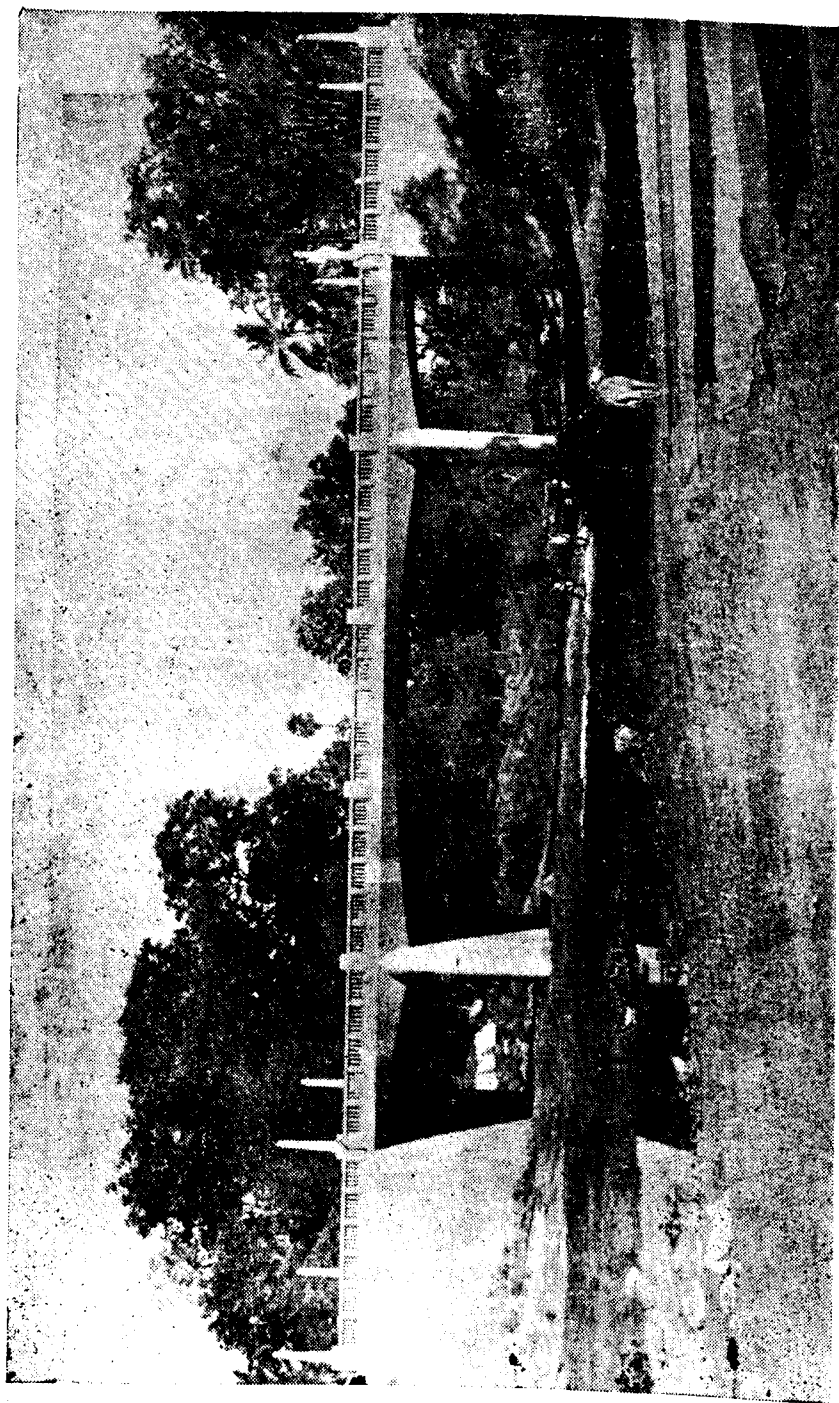
Black-topping Madras-Calicut Road Mile 231/1+500' to 236/5—Estimate Rs. 2,20,700—Salem Division.—The main feature of the work is to widen the metalled portion and black-topping to 22 feet width. The work of widening was completed and the black-topping was in progress.

Providing wearing surface to Ramnad-Mandapam Road 0/0 Mile. to 21/4—Ramanathapuram Division—Estimate, Rs. 10,93,000.—Soil cement base (12'x3") with sand and clay plus 8 per cent of cement to volume is provided for one bit and wearing surface with as haltic concrete for a width of 12 feet and 1½ inches thick is provided for the other bit. Metal shoulder-ing with lime metal was done to a width of 3 feet on either side. The cost per mile of soil cement base works out to Rs. 8,000 and that of asphaltic concrete to Rs. 23,500. An expenditure of Rs. 3,92,316 was incurred during the year making the up-to-date expenditure to Rs. 94,72,75.

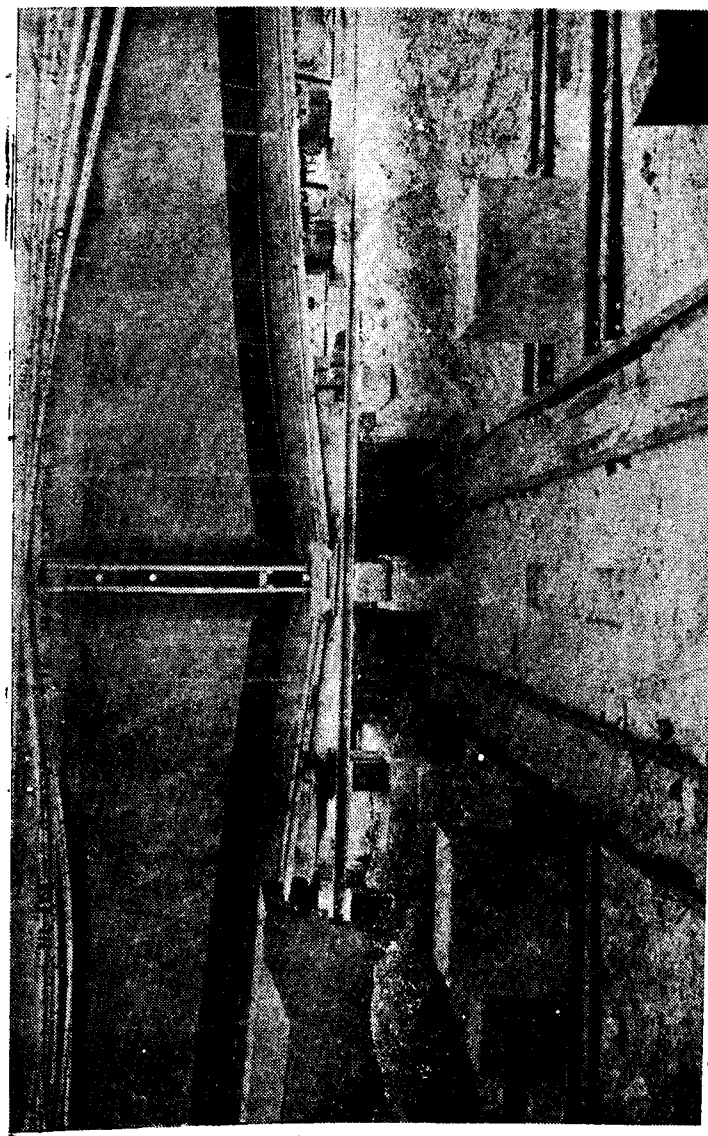
Photographs of certain works are shown in Fig. III (a) to III (j).



III.(a) - Bridge Across Gurpur River near Kulur at M.4/7-8 of Mangalore Baindur road.



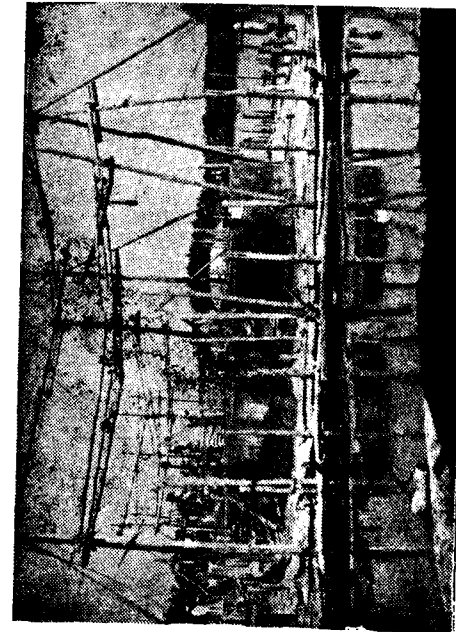
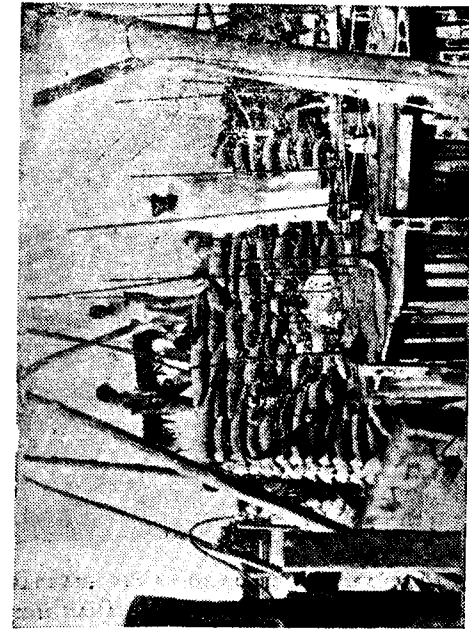
III (b).—NOTYAL BRIDGE—AT MILE 331/1 OF MADRAS-CALCUTTA ROAD.



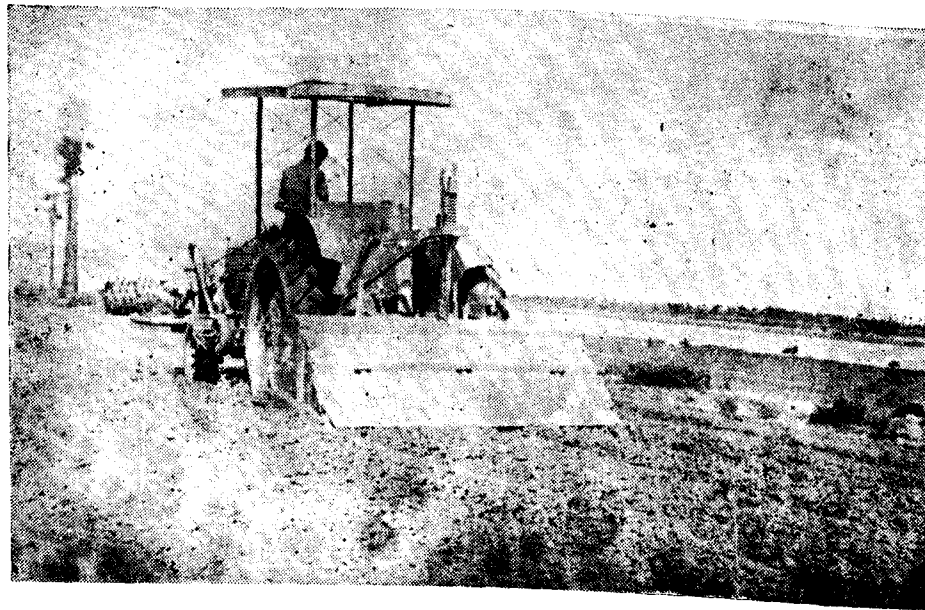
III (c).—BRIDGE ACROSS COLERCON RIVER AT ANAIKARANCHATRAM UNDER CONSTRUCTION.
A VIEW OF DEEPEST SECTION.



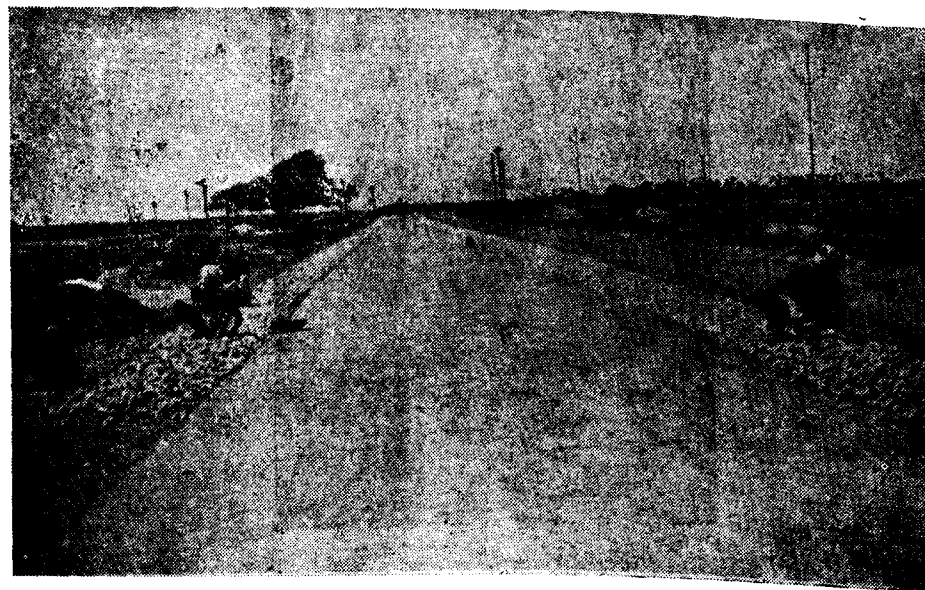
III (D).—A GENERAL VIEW OF THE SHUTTERING OF COLEROON BRIDGE.



III (E).—BRIDGE UNDER CONSTRUCTION OVER NILESHWAR RIVER AT MILE 50/2 OF KANHANGAD-CHEERUVATHUR ROAD.



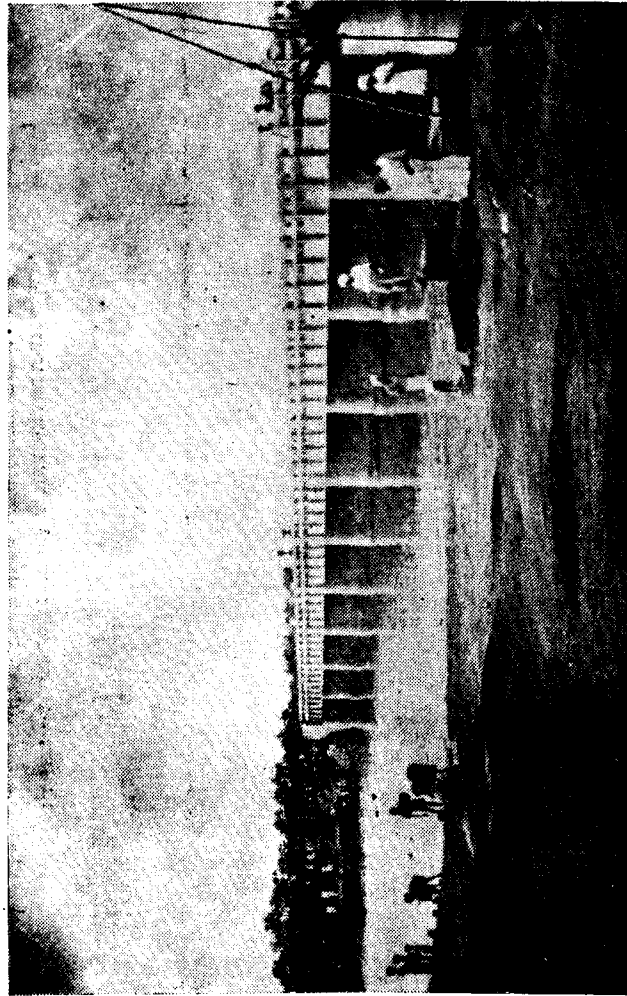
III (F).—PROVIDING WEARING SURFACE TO RAMNAD-MANDAPAM ROAD.
(PROCESSING AND STABILIZATION WITH SEAMAN MIXER).



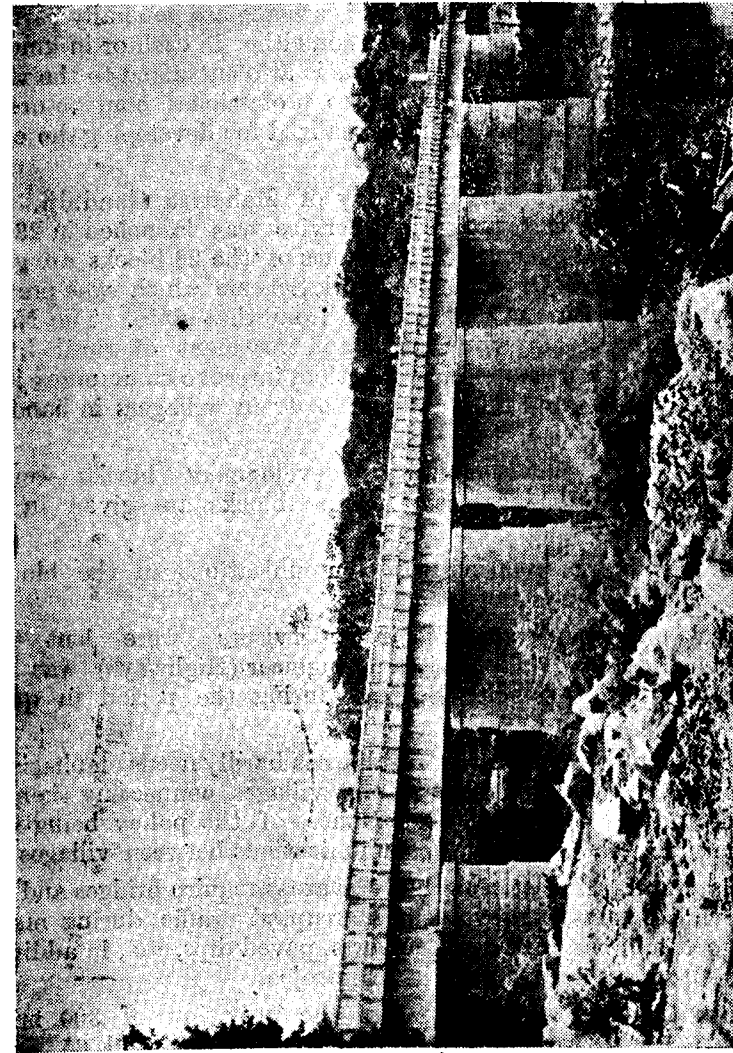
III (G).—PROVIDING WEARING SURFACE TO RAMNAD-MANDAPAM ROAD.
(COMPLETED ASPHALTIC CONCRETE).



III (H).—ANOTHER VIEW OF RAMNAD-MANDAPAM ROAD.
(COMPLETED ASPHALTIC CONCRETE).



III (2).—BRIDGE ACROSS KORAYAR IN MUTHUPET PANCHAYAT LIMITS ON JAMBUVANADU VILLAGE ROAD, TANJORE DISTRICT.



III (3).—BRIDGE AT MILE 13/1 OF HARIADKA-HEERI ROAD OVER SWARNANADHI RIVER, SOUTH KANARA DISTRICT.

CHAPTER IV.

RURAL DEVELOPMENT WORKS.

The aim of this plan is "to organize the villagers for a happier, more prosperous and future life in which the individual villager will have the opportunity to develop both as an individual and as a unit of a well-integrated society".

2. Rural development has a revitalizing effect on villages by bringing them into new activity. Works under this scheme are generally carried out where the villagers bring in their contribution either in cash or in kind or in the form of labour. The execution of works is also entrusted to the villagers and Grama Seva Sanghams in preference to professional contractors. The untapped energy of the villagers is thus canalized for developing the country side.

3. On 2nd October 1953, the birth day of Mahatma Gandhiji, a new scheme called the National Extension Service was launched in 28 blocks in the Residuary State of Madras. The names of the 28 blocks are given in Statement I. The Rural Development Work Scheme which was previously existing was merged with the new scheme from that date. The National Extension Service Blocks aim at an integrated treatment of rural life and problems designed to increase food production, improve communication and marketing, tackle disease and illiteracy and to train villagers in handicrafts essential to village life.

In addition to this, four community development blocks were also sanctioned in 1953-54 and the names of these blocks are given in Statement II.

4. Most of the works relating to communications in the blocks are attended to by the Highways Department.

Twenty-eight Junior Engineers-cum-Supervisors were lent to the Extension Service recently. No Assistant Engineer (Highways) was posted to the National Extension Service Scheme during the period in question (1953-54).

The importance of good roads for rural areas hardly needs emphasis. An attempt was made to construct roads in the villages connecting them with the main roads and the markets in pursuance of the policy being one of developing the main roads as well as communications between villages.

In the Malampuzha Project area the rural areas require bridges and major culverts across hill streams to provide uninterrupted traffic during monsoon months. A good number of bridges, culverts, paved dips, etc., in addition to the metalling of roads were taken up in this project.

In the South Kanara Project as against the provision of 300 miles of kutchra roads 232 miles were formed up to 30th June 1954 and 65 culverts and 3 bridges completed. Estimates in respect of 168 culverts and 22 bridges were sanctioned. Twenty-three out of 47 foot-bridges proposed were constructed.

In the Lower Bhavani Project area, 41 miles and 2½ furlongs of kutchra roads were laid by the villagers themselves and two bridges were completed. Seventeen miles and 2 furlongs of roads were under execution departmentally.

Eight roads and 153 culverts were sanctioned in the Periyar Project of which 42 culverts were completed by the end of June 1954.

In the National Extension Service Blocks, 295 miles of roads were formed and roads to a length of about 40 miles were repaired.

STATEMENT I.

NATIONAL EXTENSION SERVICE.

The following blocks were initiated in 2nd October 1953 with reference to G.O. No. 1190, R.W., dated 26th September 1953 :—

Serial number and name of district.	Name of blocks.	Number of blocks into which they were to be constituted.
(1)	(2)	(3)
1 North Arcot	1 Kalasapakkam	2
	2 Tiruvannamalai	
2 South Arcot	1 Panruti	3
	2 Kurinjipadi	
	3 Chinnasalem	
3 Chingleput	1 Thiruvallur	2
	2 Kadambathur	
4 Coimbatore	1 Tiruppur	2
	2 Kangayam	
5 Madurai	1 Tirumangalam	3
	2 Kallupatti	
	3 Usilampatti	
6 Malabar	1 Tellicherry	2
	2 Payyanur	
7 Nilgiris	1 Kundah	1
8 Ramanathapuram	1 Srivilliputhur	2
	2 Sivakasi	
9 Salem	1 Krishnagiri	2
	2 Attur	
10 Tanjore	1 Vedaranyam	2
	2 Tiruthuraiyandi	
11 Tiruchirappalli	1 Musiri	3
	2 Perambalur	
	3 Karur	
12 Tirunelveli	1 Sankarankoil	2
	2 Kurivikulam	
13 South Kanara	1 Manjeshwar	2
	2 Sullia	
Total ..		28

STATEMENT II.

COMMUNITY DEVELOPMENT BLOCKS SET UP IN 1953-54.

- 1 South Arcot district A portion of Chidambaram taluk round Sathiathepe excluding the urban area of Chidambaram town.
- 2 Chingleput district A portion of Chingleput taluk.
- 3 Tirunelveli district A portion of Ambasamudram taluk.
- 4 Madurai district A portion of Dindigul taluk.

CHAPTER V-

INSPECTIONS.

(a) *Inspection of Division Offices by the Superintending Engineers (Highways).*

During the year under report the division offices continued to be inspected by the Superintending Engineers as per the standing orders that the inspection of each division office should be conducted once in a year. A brief summary of the inspections done by the Superintending Engineers (Highways) is rendered below :—

I. Tiruchirappalli Circle.

All the division offices in this circle were inspected by the Superintending Engineers more or less on the expiry of one year from the date of last inspections. The office of the Divisional Engineer (Highways), Chingleput Division at Saidapet, the Transport and Machinery Division Office at Madras and the Designs Division Office, Chepauk, Madras, were attached to Tiruchirappalli Circle with effect from 1st October 1953 consequent on the formation of the Andhra State. Prior to their integration in Tiruchirappalli Circle, they were functioning under the direct control of the Chief Engineer (Highways) in charge of II Circle, Madras. The offices of Chingleput and Transport and Machinery Divisions were therefore inspected by the Chief Engineer (Highways) on the dates noted against them.

Serial number and name of division. (1)	Date due for inspection. (2)	Date of actual inspection. (3)
1 Chingleput	16th February 1953 ..	20th June 1953.
2 South Arcot	15th December 1953 ..	15th March 1954.
3 Nagapattinam	13th March 1954	22nd January 1954.
4 Tanjore	12th March 1954	27th February 1954.
5 Tiruchirappalli	3rd November 1953	25th November 1953.
6 Madurai	27th March 1954	23rd April 1954.
7 Ramanathapuram	24th October 1953	23rd October 1953.
8 Tirunelveli	23rd January 1954	24th December 1953.
9 Coleroon Bridge division ..	15th October 1953	28th November 1953.
10 Transport and Machinery division .. ..	..... ..	27th April 1953.
11 Designs division .. ..	..... ..	.....

The inspections of the divisions revealed that the offices were kept generally under a satisfactory condition.

II. Coimbatore Circle.

In the middle of the year the North Arcot Division at Vellore was merged with Coimbatore Circle, which was hitherto under the direct charge of the Chief Engineer (Highways) in the II Circle, at Madras.

All the divisions in this circle were inspected by the Superintending Engineer (Highways) on the dates noted against them.

Serial number and name of division. (1)	Date due for inspection. (2)	Date of actual inspection. (3)
1 Mangalore	12th May 1953	30th May 1953.
2 Coimbatore	6th September 1953	28th September 1953.
3 Erode	10th October 1953	13th October 1953.
4 Kozhikode	27th October 1953	12th November 1953.
5 Krishnagiri	21st November 1953	12th December 1953.
6 Vellore	15th January 1954	18th January 1954.
7 Palghat	21st February 1954	16th February 1954.
8 Salem	21st March 1954	9th March 1954.
9 Ootacamund	27th June 1953	30th July 1953.
10 Bharathapuzha Special division. (This was closed on 31st July 1953.)	16th September 1953	25th July 1953.

The result of inspection of the offices was found to be generally satisfactory.

(b) *Inspection of circle offices by the Chief Engineer (Highways).*

The circle offices have to be inspected by the Chief Engineer (Highways) once in two years.

Accordingly, the office of the Superintending Engineer (Highways), Coimbatore, was inspected by the Chief Engineer (Highways) on 20th July 1953 and it was observed that the general control exercised by the Superintending Engineer (Highways) was satisfactory.

The circle office at Tiruchirappalli was due for inspection on 18th December 1953. Owing to the formation of Andhra State on 1st October 1953 the inspection of this circle office was postponed.

CHAPTER VI.

STATISTICS.

(a) *Tests, Experiments and Research.*

During the year 1953-54 a number of investigations and tests on soil stabilization and investigations of soils for foundation of bridges were conducted both in the Soil Research Laboratory and in the field.

Soil Stabilization,

In the formation of Ramnad-Mandapam road Mile 0/0 to 21/4 (National Highway No. 49), sand and binder soils available for use in the soil cement base course were tested for their engineering properties with various proportions of cement, and design mixes for the different reaches were arrived at on the basis of compressive strength and durability.

Soils from the site of the causeway at Mile 19/7 of Devakottai-Devipattinam road were tested for their suitability of use as soil cement sub-base under cement concrete pavement with various percentages of cement and design mix was determined.

Tests were conducted on samples of cinder ash obtained from the Thermal Station at Samayanallur in Madurai district and its combination with three clay soils obtained from the Mile 291 of Great Southern Trunk Road. Test results showed that the cinder had doubtful value as stabilizer for the soils tested but it could be used as a well drained low grade aggregate for effecting drainage on the shoulders for berms and not as a material to withstand abrasion.

Soil investigation for foundation of bridges.

Identification and classification tests to find out bearing capacity and settlement characteristics of the undisturbed soil samples were conducted for foundations of bridges under construction across the Coleroon river at Anaikaranchatram and for the Malpe side abutment of Kalmadi bridge in South Kanara district. Field and laboratory tests were also conducted on disturbed soil samples for foundations of the proposed bridge across river Chettuvayi at Mile 3/6-8 of Kootungal-Ala road in Malabar district.

Experiment on "S. V. Ceremul-M" as a curing agent for concrete.

As suggested by Government of India a wax emulsion known as "S. V. Ceremul-M" produced by Standard Vacuum Oil Company was tried as a curing agent for concrete pavement in two stretches of roads, viz., Madras-Calcutta road (National Highways 5) Miles 4/6 to 12/0 in Chingleput Division and Salem-Namakkal road (National Highways 7) Mile 70/0 to 81/4 in Salem Division. The surface behaviour of the two stretches is watched and tests are being conducted to compare the crushing strength and behaviour of the concrete pavements cured with the ceremul and with water in the usual way.

Other activities.

The Highways Department took keen part in the Technical Exhibition held during the 18th Annual Session of the Indian Roads Congress held at Bhuvaneshwar at Orissa during February 1954 and displayed several models and exhibits relating to bridges, soil stabilization works, etc., in the State.

(b) Investigation of roads.

During the year under report 30 investigations on Government roads and 46 investigations on District Board roads were conducted by the department. The comparative figures of investigations done since 1946-47 are given in Annexure 21 (i) and the division-wise details for the year 1953-54 are furnished in Annexure 21 (ii).

A brief summary on the investigations carried out in certain divisions is given below :—

Kozhikode Division.—Investigation for the formation of a bypass road at Mahe under Government was conducted by the regular staff of the Division and the work was completed.

In respect of District Board, the following two works were investigated :—

- (1) Formation of Pattuvam Village Road (Second reach).
- (2) Improvement and upgrading Perangali-Chokkuli road.

Coimbatore Division.—Investigation for the formation of road from Mannarghat to Chinnathadagam was in progress.

Salem Division.—Reinvestigation of forming a road over Kolli Hills was taken up during the year and completed in May 1954. The estimate for the entire reach was prepared.

Palghat Division.—Investigation of culverts on Kottapady and Kundukadavu road was conducted during the year. On West Coat road the work of "Muttichina diversion" was investigated.

Tiruchirappalli Circle.—Investigation for the formation of village roads was done during the year and the work was attended to by the regular staff of the divisions. No special features were encountered during investigations.

(c) Investigation of bridges and culverts.

Investigations were in progress for the following few works during the year.

Kozhikode Division.

Reconstructing the culvert at Mile 33/6 of Kozhikode-Cannanore road.

Salem Division.

- (1) Constructing a culvert at Mile 12/5 of Tiruchengode-Namakkal Road.
- (2) Constructing a bridge at Mile 8/6 of Tiruchengode-Namakkal Road.
- (3) Constructing a culvert at Mile 234/2 of Madras-Calicut road.

(d) Costs of Labour and Materials.

Chingleput Division.—The condition of labour and cost of materials were fair during the year. Labourers were available on daily wages from Re. 1 to Rs. 1-8-0 according to localities and nature of work involved. The cost of materials remained the same as in the previous year with slight fluctuations according to localities and demand.

South Arcot.—Labour was generally available but outturn was not commensurate with wages paid for. In some places skilled labour had to be brought from other districts.

Tanjore.—The labour conditions remained the same as in the previous year but the cost of road materials had slightly gone down possibly due to competition.

Ramanathapuram.—There was trend for the falling of prices due to fairly good rains. But as the agricultural operation in the district was going on vigorously, there was dearth of labour for other works.

Tirunelveli.—Due to failure of monsoon especially in Koilpatti, Sankaran-koil, Tiruchendur and Nagurner taluks, agricultural labourers were thrown out of employment and they were employed on famine relief works sanctioned by Government.

Kozhikode Division.—There was considerable improvement in labour condition ; while the cost of materials was on the increase.

Krishnagiri Division.—There was dearth of labour in Hosur and Harur taluks and Pennagaram Firka and a little high premium rates were quoted by the contractors in these areas. Works had to be got done through piece workers or departmentally and much difficulty was experienced in getting them executed.

Salem Division.—There was no appreciable improvement in the condition of labour in the locality.

Coimbatore Division.—The labour position improved during the year 1953-54 and there was a reduction of 10 per cent in the schedule of rates.

Erode Division.—Though there was improvement in the condition when compared with that of previous years on account of fairly good rains during the year and due to the irrigation facilities afforded by Lower Bhavani Project, the cost of labour and materials was high and difficulties were felt in securing labour.

Vellore Division.—The cost of skilled and unskilled labour had considerably increased throughout the district and it was very high in Tiruvannamalai and Gudiyatham taluks. In the taluks of Tiruppattur and Gudiyatham even unskilled labour for breaking road metal had to be imported from Salem district. Consequently special rates were to be allowed in these areas.

Ootacamund Division.—There was no appreciable fluctuation in rates of 1952-53 and there was also no scarcity of labour in the district during the year.

Mangalore Division.—Acute scarcity of skilled labour continued to be felt as in the case of previous years and there was no change in the conditions.

On account of scarcity and high cost of labour, even well experienced and enterprising contractors did not come forward to take up works at reasonable rates and no tenders at all were received in some cases. As such, work had to be done departmentally.

Palghat Division.—The cost of materials and labour were high.

(e) *Traffic census.*

During the year under review no census of traffic on roads was conducted. The decision to conduct census once in three years was under consideration.

(f) *Tools and Plant.*

I. General.

(i) *Indexing system for Plant and Machinery.*—This department is having several kinds of costly plant and machinery and they are located in the various divisions. Most of them are intended for general use and have to be transferred from one place to the other as and when required for the works. To ensure prompt supply of plant to the works requiring them in the various places according to their priority and to effect proper distribution of the plant among the various divisions, it was found necessary that the Chief Engineer (Highways) should have complete control of the plant and machinery and should keep track over their movements. To achieve this object, a modern system of indexing for Plant and Machinery is being maintained in the office of the Chief Engineer with effect from 1st March 1953.

Under this system, an index card is prepared for each and every plant in duplicate, noting in it the full history of the plant and the cards are properly arranged plant-wise and Division-wise in Kardex indexing cabinets. A specimen card is given at the end of the chapter. Whenever a plant is moved from one Division to another, the officer who despatches or receives the plant is required to send a plant movement report to the Chief Engineer on the very same day the plant is despatched or received as the case may be. On receipt of the plant movement report in the office of the Chief Engineer, the fact of movement of the plant is entered in the index cards of the plant concerned and one of the cards kept in the Division-wise Kardex equipment is changed from one Division to another in accordance with the movement of the plant.

The location of the plant in the various divisions is also indicated in a Graphdex board which shows at a glance the total number of plant in each category available in each division. The changes in the number of plant in each division due to the movement of the plant are posted in the board then and there on receipt of the plant movement reports so that the board could always show the latest position of the plant in the department.

In order to easily distinguish and name each and every plant in this department, all plants under each category were assigned a departmental number called 'Transport and Machinery No.' and this number was got painted on each of the plant concerned. This was done, because, at present, out of the various categories of plant available in this department, only certain categories like lorries and rollers are having Registration numbers prescribed under the Motor Vehicles Act and hence can easily be distinguished

and named, and other plant like compressors, vibrators, etc., do not have any such distinguishing numbers. After this numbering, all the plant in this department without any exception are having distinguishing numbers and it has now become easy to locate and distinguish each of them.

The system is being maintained properly and the distribution and control of transport and machinery are made, fully utilizing the advantages.

(ii) *Purchases of plant and machinery.*—During the year under review, plant and machinery to the tune of Rs. 9.5 lakhs were acquired for use on the road and bridge schemes. The following are the important items for which orders were placed during the year :—

1 Asphalt mixer	..	..	..	..	1
2 Bitumen boilers	..	..	..	..	44
3 Strain measuring unit	..	..	..	..	1
4 Road danger lanterns	..	..	..	..	500

(iii) *Purchase and distribution of stores.*—Stores like spares for plant and machinery are kept in this department under "Stock" in three places, viz., in the Transport and Machinery Stores Subdivision at Madras, Transport and Machinery Workshop at Pudukkottai, and Transport and Machinery Subdivision at Coimbatore. The value of stock held in all these three places during the year under review was Rs. 5.76 lakhs. Hitherto it was the practice to take the spares, etc., required for repairs and replacements from the stock held in the above places, and in several cases, if any particular kinds of spares are not available in stock, to purchase such items locally whenever needed. It was found that such piecemeal local purchases are not conducive to economy and also involves delay in acquisition and consequential delay in repairing the plant, etc., and that only by purchasing all kind of spares necessary for this department in bulk and in advance, will the cost of their acquisition be less and the repairs to the plant and machinery can be carried out without delay. The introduction of an efficient system of purchase of stores and stock-keeping was therefore under contemplation during the year under review. Under this system no piecemeal and local purchases of spares are to be made, and enough stock of all kinds of spares required for the department should be acquired in bulk and in advance through the only source, viz. 'Stock' by increasing the stock limit to the required extent. The spares so acquired are to be equitably distributed among the above three stock-keeping centres. Certain common and frequently required items of spares like tyres, tubes, etc., are to be further distributed and kept in the various divisions to have the spares within the easy reach of the plant located in the divisions to facilitate prompt replacement.

(iv) *Verification of stores.*—With reference to paragraph 325 of the Madras Public Works Department Code, the stores held in stock have to be got checked at least once in a year by an officer not below the rank of subdivisional officer. The verification has to be made by an independent officer, i.e., other than the one who is in charge of the stores so that discrepancies and shortages, if any noticed, would be fully and promptly reported to the higher authorities concerned. Particularly for this department, which is having a huge stock with a large number of items of stores in each kind, the verification should be

effective. A separate stock verification subdivision was therefore created with a staff consisting of one Stock verifier (Assistant Engineer) and one Assistant Stock Verifier (Junior Engineer) with other office staff. The first verification of the stores held in the three centres in this department was being proceeded with by the stock verification subdivision during the year under review.

(v) *Other activities.*—A demonstration of Cater-Pillar Motor Grader was conducted by Messrs. Larsen and Tubro, Limited, near Madras during February 1954 to show the multiple uses that the graders can be put to in construction and maintenance of roads. The demonstration was attended by many of the officers of this department. The object of this demonstration was to show the various uses that a motor grader can be put to.

(vi) *Partition of Andhra State.*—Consequent on the partition of the Andhra State on 1st October 1953, the plant and machinery and stores remained the property of, or, as the case may be, passed to the State in which they were situated. With regard to un-issued stores, action was being taken to divide them in accordance with paragraph 3 of Seventh Schedule of the Andhra State Act, 1953.

II. Transport and Machinery Organisation.

The works of major and minor repairs to plant and machinery, purchase and distribution of fresh items of machinery and stores, and manufacture of certain equipments are got done through the Transport and Machinery Organization of this department.

The Transport and Machinery Division at Madras with a stores subdivision and a workshop subdivision under it functioning under the direct control of the Chief Engineer (Highways) continued, attending to all kinds of major repairs, purchases and distribution of plant and machinery and stores and manufacture of equipments like bitumen boilers, machinery and drum mixers, water carts, plate bearings, roller bearings, trolley for conveyance of R.C. slab, etc.

The Transport and Machinery subdivisions at Coimbatore and Pudukkottai, functioning under the control of the respective Superintending Engineers, continued to attend to the major and minor repairs of the plant of the respective circles to which they are attached and to the manufacture of equipments on a small scale.

In the Transport and Machinery Workshop at Pudukkottai, workshop accounting procedure was being followed from the date of its transfer from the Pudukkottai State to Highways Department. In respect of the Transport and Machinery Subdivision at Madras, workshop system of accounting procedure was introduced from 1st April 1953.

It was proposed to bring all the three repair yards in this department to a uniform standard by equipping them with tools and machinery for carrying out all major and minor repairs and suitable proposals were under consideration.

(g) Contract.

Statistics showing the contracts awarded for Government and District Board works during the year 1953-54, under different classifications are given below :—

Classification.	Government roads.		District Board roads.	
	Number.	Cost.	Number.	Cost.
		RS.		RS.
Maintenance works	1,944	1,82,44,849	2,677	94,37,537
Surfacing works	246	18,86,254	57	6,99,943
Bridges, culverts and causeways ..	86	27,56,742	193	22,22,279

Comparative figures for the previous years are given in the Statement I in Annexure 20 and the divisionwise particulars in the Statement II.

(h) Claims and disputes.

During the year under review, two suit cases filed in the previous years by the contractor Sri Vadivelu Padayatchi claiming a sum of Rs. 6,000 in Principal Subordinate Judge's Court, Cuddalore and by Sri V. R. Govindarajan for Rs. 2,055 in the District Munsif's Court, Chidambaram, were settled. The former was decreed for Rs. 1,230-12-0 while the latter was settled by compromise.

The following were the claims put up by the contractors which were remaining to be disposed off at the end of the year :—

Name of division. (1)	Name of contractor. (2)	Nature and details of claims. (3)
Nagapattinam ..	....	The contractor for the contribution work of cement concreting Bazaar street and Nethaji road under Tiruvarur Municipality did not accept the final bill and the amount was kept under deposit. The contractor issued a suit notice. Later he agreed to refer the matter for arbitration and it was under correspondence.
Coleroon Bridge ..	....	The contractor for the major work of constructing the bridge across Coleroon at Anaikaranchatram put in several claims for losses amounting to Rs. 12,000 sustained owing to the unprecedented floods during August and September 1953 and orders of the competent authority were awaited.
Chingleput ..	Sri M. Kuppuswamy Mudaliar ..	For the supply of gravel from a quarry other than the one provided in the estimate for the special repairs to M. 37 to 38 of Chingleput-Kancheepuram road, the contractor put in a claim for Rs. 300 which was referred to for arbitration.
Do. ..	Messrs Metro Construction Syndicate.	Cement concreting M. 27 to 29/4 of Tirumushi-Satyavedu road. In regard to refund of deposit and in respect of certain additional items, the contractors referred their claims to arbitration and they were to be disposed off.

Name of division. (1)	Name of contractor. (2)	Nature and details of claims. (3)
Chingleput ..	Sri M. Kistappa Naidu ..	An amount of Rs. 1,200 was recovered from the contractor towards compensation payable under Workmen's Compensation Act. For the refund of this sum, a suit was filed by the contractor.
Tirunelveli ..	Sri A. Rangaswami Naidu ..	In respect of the work, viz., improvements to weak bridge at M. 24/1 of Palayamkottai-Tuticorin road, the contractor put up certain claims and they were referred to for arbitration to the Superintending Engineer, Public Works Department, Tanjore.
Palghat ..	....	Redecking the bridge at M. 11/3 of P.C.F. Road. Certain claims of the contractor were referred to for arbitration and they were under examination by the Superintending Engineer (Highways).

(i) Accidents.

During the year 1953-54, there were 14 accidents of which 2 proved fatal and the other in injuries.

The victims were coolies employed on road works.

The following are the details of the accidents :—

Serial number and name of district. (1)	Date and nature of accident. (2)	Name of victim and brief notes of the accident. (3)	Award. (4)	Loss of property (5)
1 Ramanathapuram.	2nd January 1954, injury.	Ganapathy. The overhanging branches of the avenue trees in Madurai-Ramanathapuram road were ordered to be cut off and special coolies were employed for this work. At M. 8/3 of the road, the work was started at about 8 a.m. on 2nd January 1954. While cutting a branch, one of the coolies named Ganapathy left the grip due to the oscillations of the branch and fell down on the road at about 10-40 a.m. and sustained fractures in the two legs.	The question of payment of compensation was under consideration.	..
Do.	15th January 1954, fatal.	Kalimuthu. On 15th January 1954, the lorry MSP. 2820, was engaged in conveying empty asphalt barrels from workspot to the base camp at Ramanathapuram. While the lorry was returning from the base camp to the workspot to bring next consignment, the 3 mazdoors engaged were in the back of the lorry and one of them Kalimuthu fell down from the lorry in motion at M. 1/5 of Ramanathapuram-Mandapam road with serious injuries. He was taken to the Government Headquarters Hospital where he died.	Do.	..

Serial number and name of district. (1)	Date and nature of accident. (2)	Name of victim and brief note of the accident. (3)	Award. (4)	Loss of property. (5)
3 Ramanathapuram.	15 Aug. 1953.	Due to the high winds on the evening of 15th August 1953, one of the big branches of baman trees was broken from the main tree and was hanging down obstructing traffic at M. 60/8 of Madurai-Tondi road. In order to remove the fallen branch of the tree from the main tree, all the gang mazdoors from M. 57 to 68/0 were engaged by the maistry. When they were cutting the trees, the hanging branch suddenly fell on the head and also on shoulder of the gang mazdoor, A Audi causing severe wounds.	The question of compensation was under correspondence.	..
4 Malabar ..	8 Mar. 1954, injury.	A. Kunhammad (South Malabar) employed as a mazdoor by contractor K. P. Mamoo of Pattambi met with an accident on 8th March 1954 at 11 a.m. While the mazdoor who was engaged in the execution of tarring work was turning the handle of the tar spraying machine the hot tar ran down on his hand and the upperside of his left hand was burnt.	Do.	..
5 Malabar ..	29 Mar. 1954, injury.	One P. Velayudhan Chettiar, aged about 18, employed as a mazdoor by contractor Sri K. P. Mamoo of Pattambi met with an accident on 29th March 1954. The mazdoor who was engaged in the execution of tarring work was carrying the hot bitumen and had his right hand burnt by accidental fall.	Do.	..
6 Madurai ..	8 May 1953, fatal.	Naranammal. She was employed by Sri Valamjee Hirjee who was entrusted with the work of constructing Markayar-kottai bridge across Suruliyar river. She and Kamatchi were carrying wooden scantlings of size 6" x 8" x 15' long for the bridge across the river to the bank. Kamatchi slipped the scantlings and Naranammal fell down receiving injuries. Later she died at Madurai hospital.	Further action was required to be taken in consultation with Special Officer, Madurai District Board.	..
7 Salem ..	14 Nov. 1953, injury.	Kuppuswamy. During the consolidation work at M. 18/1 of Salem, Cuddalore road on 14th November 1953 the cleaner Kuppuswamy of the Roller MDS 766 got his right-hand fingers caught between the toothed wheels while applying grease and his fingers were crushed. The loss of his earning capacity is assessed as 50 per cent.	The matter was under correspondence.	..

Serial number and name of district.	Date and nature of accident.	Name of victim and brief notes of the accident.	Award.	Loss of property.
(1)	(2)	(3)	(4)	(5)
8 Coimbatore, Pollachi-Meenakarai road, M. 4/2-3.	..	While the driver of the roller was top rolling in M. 4/2-3 of Pollachi-Meenakarai road, a girl aged about 5 years was accidentally run over by the rear wheel of the roller and killed on the spot.	..	..
9 Ootacamund	17 Oct. 1953.	D. Doss, a mazdoor employed on the stone crusher work, sustained injuries in the middle finger and was admitted in the hospital at Coonoor. The injured was likely to be disabled for a period of six months. A compensation of Rs. 18-8-0 per mensem was awarded by the Commissioner, Workmen's Compensation, on the recommendation of the Medical Officer for the period of disablement. The continuance of payment of compensation was further recommended by the Medical Officer and his final report was awaited.	..	..
10 Krishnagiri	13 Oct. 1953.	When the roller was moving on the reverse gear, one Muslim boy aged 18 years accidentally fell down, caught under the rear wheel and died instantaneously.	..	..
11 Transport and Machinery Division.	8 Aug. 1953.	P. Ayyaswami, cleaner, whose shirt rolled round the running mainshaft of the machine, was taken off drilled chips from the floor and had strain in the muscle. A compensation of Rs. 10-12-0 for period from 8th to 16th August 1953 was awarded.	..	..
12 Do.	..	M. Rajamanickam, hammerman sustained injury in the middle finger of the left hand, due to his careless cutting of M.S. plates.	..	..
13 Do.	1 July 1953.	Owing to the fall of a big gear wheel, M. Krishna Pillai, cleaner had injury on his leg and a compensation of Rs. 6-11-0 was given from 1st to 10th July 1953.	..	..
14 Do.	1 Dec. 1953.	V. Venkatachalapathy, a cleaner, was injured while working in the yard. Payment of compensation at Rs. 37 per mensem was sanctioned from 1st December 1953 to 28th February 1954. For loss of earning capacity caused by the permanent partial disablement, an amount of Rs. 42 was also sanctioned.	..	..

(j) Floods and monsoon damages.

There were several cases of interruption to traffic during the year in the districts of Madurai, Malabar, Nilgiris, Mangalore, South Arcot, Tanjore, Chingleput, North Arcot, Coimbatore, Ramanathapuram, Tiruchirappalli, Salem and Tirunelveli.

Prompt action was taken and traffic was restored as early as possible in all cases.

Details of roads affected and the nature of damages caused are given below:—

Serial number and name of district.	Name of road or bridge.	Month of occurrence.	Remarks as to cause of interruptions.
(1)	(2)	(3)	(4)
1 Madurai	Temporary pipe culvert at M. 13 on Mettur-Palakkanuthu road. M.D.R.	Apr. to Sep. 1953.	Floods due to heavy rains.
2 Do.	Dindigul-Palni road M. 21/3 M.D.R. and Dindigul Vattanam road between 16/1 and 18/5.	July to Oct. 1953.	Damage to pipe culverts.
3 Malabar	Bridge in 73/1 of Kozhikode-Mysore Frontier road.	June 1953.	Bridge collapsed.
4 Do.	Chathukulam-Kadanthode road M. 37 and Paverty-Cochin Frontier road, 1st mile.	July 1953.	Flood.
5 Do.	Bridges in M. 62/2 and 66/7 of Kozhikode-Mysore Frontier road.	August 1953.	Bridges unsafe.
6 Do.	Bridge at M. 1/3 on Vayithiri-Poidana road.	Do.	Floods.
7 Do.	Bridge at M. 49/8 Kozhikode-Mysore Frontier road.	Dec. 1953.	Wooden decking of the bridge damaged.
8 Do.	Chathukulam Kadanthode road, at M. 36/6 to 37/3.	Mar. 1954.	Floods.
9 Nilgiris	Calicut-Vayithiri-Gudalur road at M. 63/5.	July 1953.	....
10 Mangalore	Mangalore-Mercara road between 6th and 7th mile.	Do.	Floods,
	Mangalore Mercara road, 65/2 ..	Do.	Do.
11 Do.	Hosangady bridge, 6th mile of Mudabidri-Guruvenkara road.	Do.	Do.
12 South Arcot	Cuddalore-Chittoor road at M. 45 Pennar causeway.	Oct. 1953.	Do.
13 Do.	Pennar causeway in Villupuram West section.	Do.	Do.
14 Do.	Wandiwash-Polur road, M. 31/5 Cheyyar river.	Do.	Do.
15 Do.	Causeway at M. 25/3, Arcot-Tindivanam road.	Do.	Do.
16 Do.	Cuddalore-Vridhachalam road ..	Do.	Do.
17 Do.	Causeway at M. 14/2 of Cuddalore-Chidambaram road.	Do.	Do.
18 Do.	Bridge at M. 7/4 of Cuddalore-Chidambaram road.	Mar. 1954.	Do.
19 Tanjore	M.D.R. 6 Pattukottai to Aranthangi via Novgavaram M. 6/4. Agniar river.	July 1953.	Do.
20 Do.	Pattukottai-Arantangi road, Agniar river, M. 6/4.	Aug. 1953. Oct. 1953.	Do.

Serial number and name of district.	Name of road or bridge.	Month of occurrence.	Remarks as to cause of interruption.
(1)	(2)	(3)	(4)
21 Tanjore	Pattukottai-Arantangi road, Maha rajasamudram Agniar river.	Nov. 1953.	Floods.
22 Do.	Causeway at M. 8/8 Tanjore-Trichirappalli road.	Mar. 1954.	Do.
	Appakanar at M. 35/6 of Tiru-turaipundi-Vedaranniyam road.	Dec. 1953.	Do.
23 Chingleput ..	Tiruporur-Mahabalipuram road ..	Sep. 1953.	Do.
24 Do.	Tirukalikunram-Tiruporur road ..	Oct. 1953.	Do.
25 Do.	Madras-Mahabalipuram road, M. 30-7 F.	Do.	Do.
26 Do.	Diversion at 30/7-8, Madras Mahabalipuram and Dam at M. 1/7 Tirukalikunram-Tiruporur road.	Do.	Do.
27 Do.	Periapalayam causeway, 8/5-6 of Korthalayar bridge, Puthur road.	Do.	Do.
28 Do.	Palar causeway at M. 39 of Madras-Dindigul road.	Do.	Do.
29 Do.	Uthiramerur-Kancheepuram road, M. 7/1 Cheyyar river and 14/6 Palar river.	Do.	Do.
30 Do.	Kancheepuram-Wandiwash road, M. 7/6 Palar river.	Do.	Do.
31 North Arcot ..	Katpadi Venkatagirikota road, M. 18/7 and 8.	Do.	Do.
32 Do.	Ambur,Sadghur road, M. 0/7 ..	Do.	Do.
33 Do.	Pallikonda-Palamaner road, M. 0/7-8 and 1/1.	Do.	Do.
34 Do.	Ranipet-Krishnagiri road, M. 72 Wenlock causeway.	Do.	Do.
35 Do.	Arkonam-Ocheri road. M. 13/2 and M. 8/2.	Do.	Do.
36 Do.	Tiruvannamalai-Vattavalam road, M. 56/5.	Do.	Do.
37 Do.	Cuddalore-Chittoor road, M. 64/5.	Do.	Do.
38 Do.	Polur-Chengam road, M. 8/4 ..	Do.	Do.
39 Do.	Salem-Tirupathi road, M. 47/5 Dowladapad-Cuddalore road, M. 20/1-18/3.	Do.	Do.
40 Do.	Wandiwash-Polur road, M. 31/5 and Arni Chetput Road, M. 6/2.	Do.	Do.
41 Coimbatore ..	Coimbatore-Satyamangalam road.	Do.	Do.
42 Palghat	Causeway at M. 32/3 of Shoranur-Pattambi road.	Feb. 1954.	Bridge collapsed.
43 Ramanathapuram.	Mudukulathur-Sayalgudi road, M. 8/4.	Oct. 1953.	Heavy rain.
44 Do.	M.D.R. Ramanathapuram-Keelakarai road.	Do.	Do.
45 Tiruchirappalli ..	Tiruchirappalli-Chidambaram, M. 44/7 bridge.	Do.	Do.

Serial number and name of district.	Name of road or bridge.	Month of occurrence.	Remarks as to cause of interruption.
(1)	(2)	(3)	(4)
16 Salem	Bridge approach, M. 0/2 of Kamalapuram-Chinnathirupathi road.	Nov. 1953.	Heavy rain.
17 Tirunelveli ..	Srivaikuntam-Patimangalam road, M. 3/3 to 4.	Do.	Do.
18 Tanjore	M. 13/6 of Madukur-Peruvalandur road.	Do.	Do.
19 Coleroon Bridge ..	....	Aug. Sep. 1953.	Do.
50 Krishnagiri ..	Benares-Cape Comorin road, M. 159/3 to 169/9.	Oct. 1953.	Do.

(k) Avenues.

During the year, 77,433 plants on Government roads and 35,173 plants on district board roads were newly planted out of which 59,413 and 24,765 survived respectively.

Divisionwise particulars of number of trees planted and the number survived, expenditure incurred and income derived are given in Annexure 26. An expenditure of Rs. 4,12,937 on Government roads and Rs. 1,23,479 on district board roads was incurred during the year on the maintenance of avenues, while the income derived on avenues was Rs. 4,47,756 and Rs. 1,83,518 in respect of Government and district board roads, respectively.

Analysis of figures in Annexure 26 discloses that there are only 88 trees per mile on Government road and 24 trees per mile on district board roads whereas the number of trees required per mile is about 300.

(l) Ferries.

During the year, 55 ferries were maintained by the department and an amount of Rs. 3,26,794 was realized towards revenue. Divisionwise particulars of ferries maintained are given in Annexure 28.

(m) Inspection Bungalows.

Sixteen Inspection bungalows were in charge of the department and an expenditure of Rs. 8,991 was incurred on their maintenance while an income of Rs. 3,749 was realized therefrom. Divisionwise details are furnished in Annexure 29 (ii).

(n) Travellers' Bungalows.

One hundred and eighty nine travellers' bungalows of Classes I to III and 75 rest houses were maintained by the department during the year. A sum of Rs. 1,49,796 was incurred towards their maintenance and an amount of Rs. 47,571 was realized towards rents.

Details of travellers' bungalows in each division, expenditure incurred and income derived are given in Annexure 29 (iv).

(o) Encroachments.

Government roads.—Nine thousand and twenty-four cases of encroachments were detected during the year, 6,655 numbers licensed, 3,934 numbers evicted and 4,362 numbers of objectionable and 9,017 numbers of unobjectionable encroachments were pending disposal at the end of the year.

Details of encroachments in municipal and non-municipal areas are given in annexure 27 (i).

District board roads.—Two thousand and seventy-one numbers of encroachments were detected during the year, 1,144 numbers licensed, 731 numbers were evicted, 1,005 of objectionable and 231 numbers of unobjectionable cases were pending disposal at the end of the year.

Divisionwise details of encroachments under municipal and non-municipal areas are furnished in annexure 27 (ii).

(p) Works approved by Government under Post-war Road Development Scheme.

During the year, eight works to a total cost of Rs. 8,05,900 on Government roads and thirty-two works costing Rs. 5,48,700 on district board roads were approved by Government.

Division wise details showing the number of works approved during the year and those approved to end of the year are shown in annexure 15.

(q) Work done in the offices of the Superintending Engineers (Highways) and Divisional Engineers (Highways).

Divisionwise particulars of technical sanction accorded to estimates, tenders and agreements accepted by the Superintending Engineers (Highways) and Divisional Engineers (Highways) are furnished in the statements in Annexures 16, 17 and 18.

(r) Work done in the office of the Chief Engineer (Highways).

Details of technical sanction to estimates, tenders dealt with and contracts approved are given in Annexure 19.

STATEMENT I.

Index Card.

Page 1 (a).

Serial number.	Engine No.	Registration number.
Name of plant.	T. & M. Plant No.	Chassis No.
Make.	Year of purchase.	Capacity.
Model.		Capital cost. Rs.
Operated by—		
Administrative approval.	Technical sanction.	
Authority approving purchase.	Purchase made by	
Name of driver.	Name of cleaner.	
General remarks.		

Page 1 (b).

Serial number.	Registration number.
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |	
Name of plant.	
1 — 3 — 5 — 7 — 9 — 11 — 13 — 15 — 17 — 19 — 21 — 23 — 25 — 27 — 29 — 31	

Page 2.

Statement of Expenditure and Revenue.

Year.	Expenditure.			Revenue.				Remarks.
	Ordinary repairs and maintenance.	Special repairs.	Total.	Departmental.	Contractors.	Other sources.	Total.	
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	
1946-47	..							
1947-48	..							
1948-49								
1949-50	..							
1950-51	..							
1951-52	..							
1952-53	..							
1953-54	..							
1954-55	..							
1955-56	..							
1956-57	..							
1957-58	..							
1958-59	..							
1959-60	..							

Page 3.

Movement of plant from division to division.

From		To		Purpose of movement.	Authority for movement.	Remarks.
Division.	Date of despatch.	Division.	Date of receipt.			

Page 4.

Accidents occurred since 1st April 1946 to date.

Date.	Nature of accident.	Damages caused.	Result.	Remarks.
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CHAPTER VII.

ACCOUNTS AND AUDIT.

1. The special scheme of accounting and audit sanctioned by the Government and the Comptroller and Auditor-General of India for the department, described in the various report, continued to function during the year. The Government have ordered the continuance of the arrangements as a feature of the department.

2. Consequent on the formation of the separate Andhra State from 1st October 1953, the detailed books and other account records were kept separately for the two States commencing from April 1953. These records relating to Andhra area were handed over to the Accounts Officer (Highways), Andhra, after completion of audit of the accounts for September 1953, on constituting a similar accounts organization for the Highways Divisions in the Andhra area with effect from 1st November 1953.

As an effect of the formation of the Andhra State the post of Deputy Accounts Officer was abolished and the duties of that post were also attended to by the Accounts Officer.

The following is the analysis of the items of objections outstanding on 31st March 1954 :—

Particulars. (1)	Items over three years.		Items over one year and less than three years.		Items less than one year.	
	Items. (2)	Amount. (3)	Items. (4)	Amount. (5)	Items. (6)	Amount. (7)
		RS.		RS.		RS.
(a) Want of estimate ..	42	5,72,921	185	2,14,60,027	377	10,43,963
(b) Excess over estimate ..	109	16,28,497	324	19,03,805	378	42,39,789
(c) Want of appropriation.	..	..	..	..	..	..
(d) Excess over appropriation.	..	..	..	..	..	..
(e) Want of vouchers ..	25	9,812	203	1,17,842	387	2,70,762
(f) Miscellaneous irregularities.	..	..	4	8,013	2	26,253
Total ..	176	22,11,230	716	2,34,89,687	1,144	55,80,767

The total number of outstanding objections was 2,036 and the amount under objection Rs. 3,12,81,684.

These objections were being got cleared by issue of special letters urging the officers for early regularization of the objections.

CHAPTER VIII.

COMMITTEES AND CONFERENCES.

(a) *The Board of Communications, Madras.*

During the period under report no meeting was held. The question of appointment of members to represent certain interests was under consideration of the Government. The next meeting will be held soon after the selection of the non-official members.

(b) *Central Annual Conference of the Superintending Engineers (Highways) with the Chief Engineer (Highways).*

The Central Annual Conference of the Superintending Engineers (Highways) was held at Madras on 21st and 22nd May 1953.

The following officers were present :—

(1) Sri K. K. Nambiar, B.E., M.I.E. (Ind.), F.INST.H.E. (Eng.), M.I. MUN.E. (Eng.), M.R. SAN. SOC. C.E., Chief Engineer (Highways)—*Chairman*.

(2) Sri S. C. Nayak, M.I.E. (Ind.), Superintending Engineer (Highways), Coimbatore.

(3) Sri N. Durrani, B.SC., B.E., etc., Superintending Engineer (Highways), Tiruchirappalli.

(4) Sri M. N. Kamath, B.E., C.E. (Hons.), Superintending Engineer (Highways), Kakinada.

(5) Sri K. Ramaswamy Reddy, B.E., A.M. A.M. SOC.C.E., M.I.H.E., Deputy Chief Engineer (Highways).

(6) Sri K. Namasivayam, B.E., Divisional Engineer (Highways), Transport and Machinery Division.

(7) Sri G. S. Gnanaprakasam, B.E., Divisional Engineer (Highways), Saidapet.

(8) Sri P. R. Golikere, B.E., Divisional Engineer (Highways), Designs.

(9) Sri V. S. Ramachandran, B.A., Accounts Officer (Highways).

The following subjects were discussed :—

(1) Review of progress of the resolution passed at the last year's conference.

(2) Budget allotment for maintenance works to be announced at the commencement of the official year to facilitate execution of works on a rational basis by Divisional Engineers (Highways) authorized to take up maintenance in a year to the extent of the average expenditure on normal maintenance during the preceding three years.

(3) Extra responsibility vested in District Collectors and Revenue Divisional Officers to look into efficient administration of other departments withdrawal of special powers.

(4) Library—Reference library for Circle and Division Offices.

(5) Appointment of Supervisors and Junior Engineers against the posts of Second Grade Draftsmen in Divisional Engineers (Highways) Offices and in Circle Offices.

(6) Change of nomenclature of roads.

(7) Surface dressing with pre-coated chips under maintenance grant.

(8) Stopping manufacture of barrow mixers.

(9) Renumbering of mileage on through routes.

(10) Madras Highways Manual and Type Designs, standard specification—Water bound macadam.

(c) *Monthly Conference.*

During the year under report only one conference was held on 21st April 1953.

The subjects discussed were—

(1) Office accommodation for Chief Engineer's (Highways) Office.

(2) Purchase of Jeeps to all Assistant Engineers (Highways).

- (3) First grade for Divisional Engineers (Highways).
- (4) Printing of a Highway Quarterly Bulletin.
- (5) Travelling allowance—Special concessions applied for.
- (6) Upgrading of roads under maintenance grant upper limit of Rs. 45 lakhs fixed for Black Top works.

Though there was discussion on the above subjects, items (1) to (5) were deferred pending formation of Andhra State and a detailed report was called for by Government on item (6).

CHAPTER IX.

EVENTS.

(a) Indian Roads Congress.

The Eighteenth Session of the Indian Roads Congress was held at Bhuvanewar in February 1954.

The following were the official delegates who attended the Session which was from 4th to 11th February 1954:—

Senior Delegates.

- (1) Sri K. K. Nambiar, Chief Engineer (Highways).
- (2) Sri S. C. Nayak, Superintending Engineer (Highways), Coimbatore.
- (3) Sri M. S. Srouti, Divisional Engineer (Highways), Mangalore.
- (4) Sri P. Sirajuddin, Divisional Engineer (Highways), Ramanathapuram.
- (5) Sri P. R. Golikere, Divisional Engineer (Highways), Designs.

Junior Delegates.

- (1) Sri P. G. Nambiar, Technical Assistant to the Chief Engineer (Highways).
- (2) Sri E. C. Chandrasekaran, Assistant Engineer (Highways), Soils.
- (3) Sri T. S. Narayanaswami, Assistant Engineer (Highways), Pollachi.

A Technical Exhibition on a modest scale was held at the same time. The Highways Department took part in it. The exhibits by the Highways Department were the following:—

- (1) Statistical data on the progress made in the Department in Highways Construction including mileage of different types of roads, expenditure on various items, etc.
- (2) (a) Model of two-hinged arch bridge.
- (b) Photos of various types of bridges completed in Madras State.
- (3) Tar Boilers, 40 gallons.
- (4) Stabilized soil roads—
- (5) Cut Blocks of new types of roads and pavements.
 - (a) Progress Chart.
 - (b) Model of Ramanathapuram-Mandapam Road.
 - (c) Figures and sketches on Ramanathapuram-Mandapam Road.

Pavements.

- (a) Concrete—
 - (i) Concrete.
 - (ii) Rolled concrete.
 - (iii) With chicol mixture.

Bituminous pavements.

Rubberized.

Foundation—Stabilised soil foundation.

- (i) Tuticorin-Tiruchendur road.
- (ii) Ramanathapuram-Mandapam road.

The Exhibition attracted large number of visitors, both technical and non-technical officials and non-officials, business people and laymen and was much appreciated by one and all.

(b) Laying of foundation stones.

Covelong bridge.—The foundation stone of the Covelong bridge over Buckingham Canal and backwaters on the road from Kelambakkam to Covelong was laid by Sri O. V. Alagesan, Hon'ble Deputy Minister for Transport, Government of India, on 27th June 1953.

Inaugurating the function, the Chief Engineer (Highways), Madras, delivered his welcome address to the Hon'ble Deputy Minister for Transport, Government of India, and explained the geographical position of and the need for a bridge at Covelong, the Tamil name for which is 'Kovalam', and dealt with the various aspects of the importance of the place by its location on the sea side and as a very good sea-side holiday resort, besides being a pilgrim centre for the Hindus, Christians and Muslims.

The Chief Engineer (Highways) described at length the bridging of the Buckingham Canal and said that, after considerable investigation and thought, an estimate for Rs. 1.75 lakhs was sanctioned for the bridge work and design as finalised, consists of a high level bridge across the Buckingham Canal with free board of 12 feet above the high water level to enable the boats to pass through. There are three causeways totalling a length of about 315 ft. consisting of Hume pipes and the rest of the portion is of earthen embankment sloping suitably at the approaches of bridges and causeways. The roadway over the embankment and the causeway would be 18 feet wide and provided with gravelled surface. The embankment would be protected by revetments. The bridge across Buckingham Canal would be over wooden pile foundation with R.C. columns and the decking of the bridge would be of R.C.C. supported by R.C. girders. The roadway over the bridge would, however, be 12 feet to provide for one lane traffic.

The construction of the bridge connects Covelong with the main road from Madras to Mahabalipuram which was recently improved for the benefit of tourist traffic, the full stretch of which was provided with black top and it will enable the tourists to avail the opportunity of visiting Covelong also with the construction of the bridge.

(c) Opening ceremony.

Thekkil bridge.

The bridge over the Payaswami river at mile 52/-8 of Kalladka-Kanhangad road was declared open for traffic on 21st October 1953 by Sri C. Subramaniam, B.A., B.L., Minister for Finance, Madras State.

The Chief Engineer (Highways) welcoming the Minister and the distinguished visitors explained certain aspects of road communications

peculiar to the district of South Kanara, such as the strange features of the rivers which have their origin within about 100 miles from the Sea coast and whose flow is very swift even during normal floods, the heavy and torrential rains continuous for long periods, the steep and difficult terrain of the country which contribute to make development of communications in the district comparatively more expensive and also indicated the necessity of constructing high level bridge crossings over the rivers.

As regards the location of the Thekkil Bridge, the Chief Engineer (Highways) said that the bridge is situated on the State Highway running north-south through the heart of the district which is now popularly known as the West Coast Road and proposed to be developed as a National Highway called the Bombay-Cape Comorin Road. Then the road will become the full liability of the Centre. In fact, the Government of India have already agreed to contribute 50 per cent of the expenditure incurred on the capital works on this road from 1st April 1951. According to the tentative programme drawn up for this district under this scheme, work aggregating to a total cost of Rs. 90 lakhs have been proposed to be taken up and completed on this road during the 5 years ending 1955-56, of which a sum of Rs. 39 lakhs has been earmarked for major bridges and Rs. 51 lakhs for road works. No less than 18 major works are included in the list, of which this Thekkil bridge is the longest and the first to be completed. With the completion of these projected bridge and road works on this road, this district would have a main line of communication to National Highways standards which not only affords a through link on the West Coast between the Madras and the Bombay States, but with the numerous access roads already connecting it with important places in the West Coast and the Mysore State on the east, this road has a great part to play in the future development of this district.

He also briefly explained a few technical features of this bridge. The bridge was designed as a reinforced concrete structure consisting of 5 spans of 100 feet clear each with bowstring girders and decking and 2 spans of 30 feet each with 'T' beams and slabs. The bridge carries a 22-foot wide clear roadway. For the abutment and wings on the Thekkil side and the first two piers on this side, open foundations have been provided as rock is available at shallow depths. Well foundations taken to rock have been provided for the remaining piers and the abutment on the other side.

The total depth of well sinking involved in this bridge is about 791 feet for all wells together, the maximum depth in the case of an individual well being about 46 feet. The piers and abutments are of coursed rubble masonry in cement mortar. The bridge work has cost about 11 lakhs and has involved the use of about 245 tons of steel and 800 tons of cement.

Bharathapuzha bridge.

The bridge over the river Bharathapuzha at M. 18/2 of Angadipuram-Kuttipuram-Cochin Frontier road was thrown open for traffic on 11th November 1953 by Sri R. Shanmugha Rajeswara Sethupathi, Minister for Public Works, Madras State.

The Chief Engineer (Highways), in his inaugural address on this occasion, dealt with the ancient history of the district of Malabar when wheeled traffic and pack bullock traffic was unknown and gave a comparison on the increasing mileage of roads in the district in the past centuries, and he explained the geographical position, the climatic conditions of the district

and the difficulty which had to be encountered in the formation and maintenance of roads and construction of bridges. He also mentioned in this connection that necessary research work has been taken up in the Highways Laboratory at Madras to devise the best surfacing which can be made from local materials and will also be economical to maintain the roads in the district.

Referring to the various bridge and road schemes in progress and completed in Malabar district, the Chief Engineer (Highways) described the importance of this bridge at Kuttipuram. The river Bharathapuzha flowing from east to west cuts the district into two parts and a major portion of the Ponnani taluk lying South of the river is completely cut off from the other parts of the district and also from the Railway system lying to the north of the river for want of a road bridge over the Bharathapuzha at a suitable point. After considering all aspects from an engineering point of view, the site at Kuttipuram was finally selected. In addition to its local importance, the bridge would satisfy the long-standing need of the area as it is situated, on the State Highways running north-south which is known as the West Coast Road.

Before concluding his speech, the Chief Engineer (Highways) explained that the bridge is a reinforced concrete structure consisting of 11 spans of 100 feet clear each with bowstring girders and decking carrying a 22-foot wide clear roadway designed for I.R.C. Class 'A'. A. loading. For the abutment and the first pier on the Ponnani side, open foundations were provided as rock was available at shallow depths. Well foundations taken to rock were provided for the remaining piers and the abutment pier on the Kuttipuram side.

The total depth of well sinking involved in this bridge was 2,384 feet for all wells together, about twice the length of this bridge, the maximum depth in the case of an individual well being 74 feet. The piers and abutments were of coursed rubble masonry in cement mortar. The bridge work had cost about Rs. 23 lakhs and involved the use of about 2,300 tons of cement and 630 tons of steel.

Bridge at mile 49/2 and 52/8 of Mangalore-Agumbee road.

The two bridges were declared open on 9th November 1953 by Sri A. B. Shetty, Minister for Public Health, Madras.

A memorandum on this occasion was read by the Chief Engineer (Highways) welcoming the Minister and explaining the scheme for the development of roads in the country under Five-Year Plan of Planning Commission and the important role the road transport has to play in the future development of the country.

In the course of his speech, the Chief Engineer (Highways) mentioned certain technical features of the bridges. The bridge at mile 49/2 of Mangalore-Agumbee road is built to replace a structure that has been serving for quite a long time. The old bridge had a total linear waterway of 94 feet with unequal spans and piers of poor masonry and tough plate decking. The roadway was 14 feet wide and the deck was designed to carry the old 'L' class loading. Modern conditions of traffic would impose strains far beyond the capacity of the bridge to bear and the standard evolved by the I.R.C. and approved for use all over India, require a very much stronger structure. The bridge that was opened is built to these latest specifications.

The foundations are open, taken down to rock and vary in depth from 4 to 16 feet below the ground level. The sub-structure is of granite masonry and the super structure is of reinforced cement concrete of the conventional 'T' beam and slab type. This is designed to carry the 'A' class loading of the I.R.C. and has a 22-foot wide roadway. It has involved the use of 116 tons of cement and 21 tons of steel and has cost Rs. 1.32 lakhs.

The bridge at mile 52/8 on the continuation of the same road was built to replace an existing structure which was found inadequate. It has 3 spans of 40 feet and is similar to the other bridge at mile 49/2 in many respects. Open foundations of this bridge were taken to rock from 12 to 20 feet below the ground level. The bridge had consumed 103 tons of cement and 32 tons of steel and has cost Rs. 1.25 lakhs.

In addition to the above bridges, the following bridge works were also declared open for traffic :—

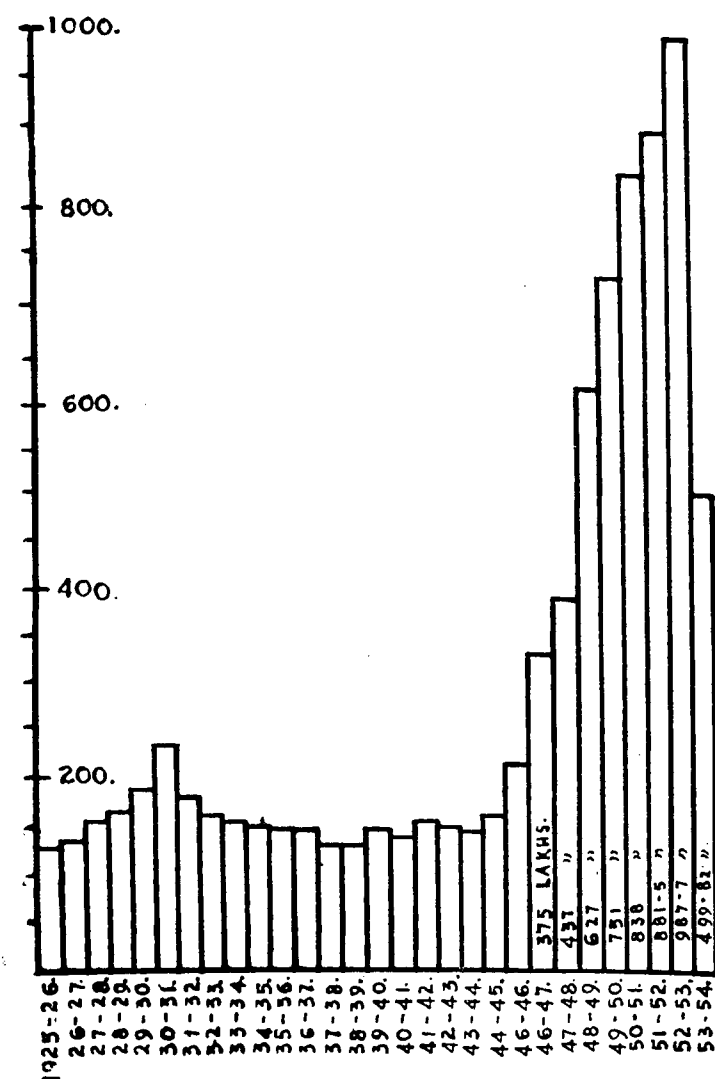
Name of work.	Opened by.	Remarks.
Bridge at M. 79/7 of Mangalore-Baindur Coast road.	Sri K. K. Nambiar, B.E., etc., Chief Engineer (H), Madras, on 17th October 1953.	This was built to replace an older bridge of laterite arches which was washed away in 1938 floods. This bridge has 9 spans of 15 feet. The foundations are taken to rock from 19 to 17 feet below bed level.
2 Bridge across Noyyal river at M. 333/1 of Madras-Calicut road.	Sri S. C. Nayak, M.I.E. (Ind.), Superintending Engineer (H), Coimbatore, on 24th January 1954.	The bridge is one of span 25, 70, 25 feet and of R.C.C. rigid frame type.
3 Golihattu bridge at M. 41/4 of Manjerabad road.	Sri S. Narasappayya, B.A., B.L., M.L.C., on 26th January 1954.	This was built to replace the old structure and it consists of 25 feet to permit modern standards of width and loading. The bridge is 89 feet long and has consumed 61 tons of cement and 14.5 tons of steel.
4 Submersible bridge at M. 25/4 of Elayangudi-Paramakudi road, Ramanathapuram District.	Sri C. Rajagopalachari, Chief Minister to the Government of Madras.	In his speech, the Chief Minister commented upon the running foot coast and recommended the construction of such economical bridges.
5 Causeway at M. 2/5 of (a) Natarajapuram Paganeri road and (b) M. 2/3 of Pattaman-galam Chokkanatha-puram road.	(a) Sri S. O. S. P. Odappayya, President District Board, Ramanathapuram; (b) Sri Raja Sir M. A. Muthia Chettiar.	....
6 Korayar bridge in Muthupet limits, Tanjore district.	Sri T. M. Bhaskar Tondaiman, M.A., Personal Assistant to Collector and Special Officer, Tanjore District Board.	....
7 Bridge over the river Kodamurutti at M. 1/1 of Ayyampettai-Ganapathi Agraharam road, Tanjore district.	Sri Sri Prakasa, Governor of Madras, on 27th October 1953.	....

GROWTH BY THE ROADS MAINTAINED BY THE HIGHWAYS DEPARTMENT AS ON 31st MARCH 1954.

1846	3,100, MILES
1880-81.	19,500. "
85-86.	19,650. "
90-91.	21,600. "
95-96.	21,600. "
1900-01.	23,800. "
05-06.	25,100. "
10-11.	26,000. "
15-16.	26,500. "
20-21.	26,500. "
25-26.	28,700. "
30-31.	32,700. "
35-36.	36,000. "
40-41.	37,900. "
45-46.	37,900. "
46-47.	37,900. "
47-48.	37,900. "
48-49.	37,974. "
49-50.	38,047. "
50-51.	38,971. "
51-52.	40,556. "
52-53.	41,488. "
53-54.	25,927. "

N.B. { THE FIGURES NOTED UP TO 1952-53 RELATE TO THE COMPOSITE STATE OF MADRAS & THAT OF 53-54 IS IN RESPECT OF RESIDUARY MADRAS STATE.

TOTAL ANNUAL EXPENDITURE
IN LAKHS OF RS.



N.B. { THE FIGURES NOTED UP TO 1952-53 RELATE TO THE COMPOSITE
STATE OF MADRAS & THAT OF 53-54 IS IN RESPECT OF
RESIDUARY MADRAS STATE.

ANNEXURE

ANNEXURE 1.

(a) Revised Statement showing mileage of and expenditure on extra-municipal roads maintained by public authorities.
 "Extra-Municipal" means outside the area of jurisdiction of a Municipality, a City/Improvement/Port Trust or Corporation or like urban body for the year ending 31st March 1952.

STATE.

Type of road.	Maintained by Public Works Department or other Government Department (see Note 1).							Maintained by local bodies (see Note 2).							Total expenditure [columns (7) plus (13)].	Unbridged mileage (see Note 3).	Remarks (see Note 4).
	Mileage.			Expenditure. (Rupees in lakhs.)				Mileage.			Expenditure (Rupees in lakhs.)						
	As on 31st March 1951.	Change since last report plus or minus on column (2).	M. F.	Total as on 31st March 1952 [columns (2) plus (3)].	New construction.	Maintenance.	Total [columns (5) plus (6)].	As on 31st March 1951.	Change since last report plus or minus on column (8).	M. F.	Total as on 31st March 1952 [columns (8) plus (9)].	New construction.	Maintenance.	Total [columns (11) plus (12)].			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	
1. Bituminous—																	
(a) Surface dressed with tar, bitumen or asphalt hot or in form of cut backs or emulsion.	733 6	+476-4	1,210 2	9-01	55-06	64-07	10 2	+19 1	29 3	2-39	1-32	3-71	1,239 5	07-73	..	125 6 *	
(b) Grouted, sheet asphalt or any base, asphaltic concrete or macadam, tar, concrete or macadam including carpets one inch thick or more.	12 1	+ 0-3	12 4	0-47	0-15	0-62	..	..	..	..	..	..	12 4	0-62	..	11 7	
2. Concrete—																	
(a) Cement concrete	163 4	+40 7	204 3	21-01	0-64	21-65	0 3	-0 1	0 2	..	0-07	0-07	204 5	21-72	..	15 4	
(b) Cement bound macadam ..	2 5	..	2 5	..	0-10	0-10	..	..	..	..	..	..	2 5	0-10	..	2 5	
3. Water bound macadam—																	
(a) Broken rock metal	6,588 5	- 33 4	6,254 5	35-46	161-63	197-14	3,916 3	+179 2	4,095 5	14-82	51-80	66-62	10,350 2	263-76	627 1	83 5	
(b) Kankar, laterite or brick metal ..	972 5	- 95 1	877 4	2-50	16-78	19-35	2,982 2	+123 7	3,106 1	8-06	24-03	32-09	3,983 5	51-44	615 0	0 5	
4. Lower types—																	
(a) Using artificially admixed granular material, gravel, moorum, etc., on the natural soil.	176 7	- 48 2	123 5	13-46	6-33	14-29	3,127 5	+ 114 0	3,241 5	13-76	7-33	21-09	3,370 2	35-38	533 0	..	
(c) Natural soil, unimprovable..	68 7	- 15 0	53 7	2-47	0-11	2-58	2,350 2	+ 319 0	2,669 2	9-10	6-10	15-20	2,723 1	17-78	438 2	..	
Total (all types) ..	9,256 4	+ 43 6	9,300 2	84-47	236-08	320-55	15,234 5	+1,337 3	16,572 0	59-99	103-56	163-55	25,872 2	484-10	2,723 7	245 0	

NOTE.—(1) Name the departments, other than Public Works Department or Highways Departments, here.

(2) The figures in columns (2) to (7) may include roads in municipal areas maintained by the Public Works Department only if the data for such roads cannot be separated easily. To indicate where such data is or is not included in this statement, please cut out one or the other of the words—yes/no.

(3) "Not fully bridges" [column (16)] means there are interruptions to traffic for periods each exceeding twelve hours on more than six occasions in the year. The mileage of the entire section affected between two important stations (and not merely the part of the section affected) should be included in the figures in column (16).

(4) Where trackways are included in the figures given (against any of the types) in the main statement, please give the mileage of these trackways in the remarks column against the relevant entries in the statement.

* The mileages of municipal reaches maintained by this department included in column (14) are separately shown under this column (vide also separate statement with expenditure on *pre rata* basis).

FORM No. 1.

*Expenditure incurred on extra-municipal roads maintained by
Public authorities during year ending 31st March 1952.*

("Extra-Municipal" means outside the area of jurisdiction of a Municipality, Town/City Corporation or like urban body.)

STATE.

(Figures to be rounded off to the nearest thousand rupees.)

Class of expenditure. (1)	Expenditure.		
	State. (2)	Local body. (3)	Total. (4)
	RS. (2)	RS. (3)	RS. (4)
1. Maintenance, repairs and minor improvements.	23,608	10,356	33,964
2. New constructions and improvements debited to Original Works (includes improvements of surfaces except surface painting with tar or bitumen-first and subsequent treatment).	8,447	5,999	14,446
3. Administration and other expenses—			
(a) Establishment	1,738	1,121	2,859
(b) Tools and Plant	7,295	178	7,473
(c) Others (see note below)	..	..	..
Total (excluding loan charges) ..	41,038	17,654	58,742
4. Loan Charges—			
Interest	..	..	..
Repayments (Principal or sinking fund) ..	..	..	..
Total (including loan charges) ..	..	..	..
Outstanding Highway DEBIT at the end of the financial year.	41,038	17,654	58,742
The amount of GRANTS from State revenues to Local Bodies for Roads.	..	3,099	..

(This amount is *not* included in column (2) as expenditure but expenditure out of the grants is included in column).

NOTE.—When the Engineering Staff of Public Works Departments and Local Bodies are also employed on works other than roads, it is impossible to allocate "Administration and other expenses" accurately. In such cases, these charges may be estimated on the basis of a percentage and the percentage indicated on both maintenance and original works.

This information is to be collected and submitted by the 1st March of the year following that to which the information relates, to:—

The Consulting Engineer (Roads), Ministry of Transport (Roads Organization), Amnagar House, Shahjehan Road, New Delhi.

FORM No. 2.

*Sources of expenditure incurred on road works for the year
ending 31st March 1952.*

STATE.

(Figures to be rounded off to the nearest thousand rupees.)

Source of expenditure. (1)	Expenditure.		
	State. (2)	Local body. (3)	Total (4)
	RS. (2)	RS. (3)	RS. (4)
1. Central Road Fund	766	680	1,446
2. State Revenues	34,122	3,099	37,221
3. Local Funds	..	13,875	13,875
4. Loans	..	..	..
5. Any other source to be specified here.. ..	6,200	..	6,200
Total ..	41,888	17,654	58,742

This information is required to be collected and submitted by the 1st March of the year following that to which the information relates, to—

The Consulting Engineer (Roads), Ministry of Transport (Roads Organization), Amnagar House, Shahjehan Road, New Delhi.

*Statement showing the expenditure on the municipal reaches on
pro rata basis for 1951-52.*

Type of road. (1)	Total mileage. (2)	Total expenditure. (3)	Mileage in municipal reaches. (4)	Expenditure on pro rata mileage basis. (5)
	M. F.	RS. (IN LAKHS.)	M. F.	RS. (IN LAKHS.)
I. Bituminous—				
(a) Surface dressed with tar, bitumen or asphaltic hot or in form of cut backs or emulsion.	1,239 5	67.78	125 6	6.87
(b) Grouted sheet asphalt or any base, asphaltic concrete or macadam, tar, concrete or macadam including carpets one inch thick or more.	12 4	0.62	11 7	0.59
II. Concrete—				
(a) Cement concrete	204 5	21.72	15 4	1.65
(b) Cement bound macadam ..	2 5	0.10	2 5	0.10
III. Water bound macadam—				
(a) Broken rock metal	10,350 2	263.76	88 5	2.26
(b) Kankar, laterite or brick metal.	3,983 5	51.44	0 5	0.01
V. Lower types—Nil.				

Statement A.—Statement showing the difference between the figures adopted in the mileage statistics and Administration Report, 1951-52 (Original Works).

Name of division.	As adopted in the adminis- tration report.	As in the mileage statistics.	Excess in the adminis- tration report.	Reduction in the adminis- tration report.
	RS. (IN LAKHS.)	RS. (IN LAKHS.)	RS. (IN LAKHS.)	RS. (IN LAKHS.)
Ramanathapuram	0.81	0.83	..	0.02
Pugalur Bridges	11.88	12.02	..	0.14
				0.16
			RS.	
Total adopted in the revised mileage statistics			84.47	
Total in the Administration report			84.31	
		Difference ..	0.16 *	

(*vide details above).

Statement B.—Statement showing the difference between the figures adopted in the mileage statistics and Administration Report, 1951-52 (Maintenance).

Name of division.	As adopted in the administration report including expenditure on avenues.	As in the mileage statistics including avenues.	Excess in the administra- tion report.	Reduction in the administra- tion report.
	RS. (IN LAKHS.)	RS. (IN LAKHS.)	RS. (IN LAKHS.)	RS. (IN LAKHS.)
1. Chingleput	21.28	20.54	0.74	..
2. North Arcot	13.73	13.32	0.41	..
3. Nagapattinam	10.83	10.91	..	0.08
4. Tanjore	14.56	14.47	0.09	..
5. Tirunelveli	13.95	13.87	0.08	..
6. Krishnagiri	7.83	7.53	0.30	..
7. Coimbatore	18.87	19.20	..	0.33
8. Ramanathapuram	16.23	16.21	0.02	..
			1.64	0.41
			RS. (LAKHS.)	
			1.64	
			0.41	
Net excess in the administration report			1.23 A	
Total adopted in the revised mileage statistics			236.08	
Deduct expenditure taken into account in respect of Public Works Department circles.			1.32	
			234.76	

	RS. (IN LAKHS)
Expenditure on Maintenance adopted in the Administration report.	231.48
Expenditure on avenues as in column (14) of Annexure 11 (i) of Administration report.	4.55
	236.03
Therefore Administration report	236.03
Therefore mileage statistics	234.76
	1.27
Difference ..	1.27
	1.23
Due to adopting different figure	Vide "A" above
Difference due to rounding	0.04
	1.27

Statement C.—Statement showing mileage of and expenditure on extra-municipal roads maintained by public authorities ("extra-municipal" means outside the area of jurisdiction of a municipality, a City Improvement Trust or Corporation or like Urban body) year ending 31st March 1953.

STATE.

Maintained by Public Works Department or other Government Department (see note).

Maintained by Local Bodies (see Note 2).

Remarks*.

Type of road.	Maintained by Public Works Department or other Government Department (see note).							Maintained by Local Bodies (see Note 2).							Total expenditure columns (7) plus (16)	
	Mileage.				Expenditure (Rupees in lakhs.)			Mileage.				Expenditure (Rupees in lakhs.)			Total expenditure columns (15) plus (17)	
	M. F. M. F. M. F.				M. F. M. F. M. F.			M. F. M. F. M. F.				M. F. M. F. M. F.			M. F. M. F.	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. Bituminous—																
(a) Surface dressed with tar bitumen or asphalt hot or in form of cut backs or emulsion.	1,194-1	+ 793-3	1,987-4	19-00	71-42	90-40	20-3	+ 56-6	86-1	0-52	1-75	2-31	2,073-5	92-73	..	..
(b) Grouted, sheet asphalt or any base, asphaltic concrete or macadam, tar concrete or macadam, including carpets one inch thick or more.	12-4	— 1-3	11-1	0-92	1-49	2-43	..	..	..	..	..	..	11-1	2-41	..	..
2. Concrete—																
(a) Cement concrete	207-2	+ 10-1	217-3	31-30	0-75	32-08	0-2	+ 0-1	0-3	..	0-04	0-04	217-6	32-12	..	..
(b) Cement bound macadam	2-5	+ 0-1	2-6	..	0-07	0-07	..	..	..	..	..	..	2-6	0-07	..	..
3. Water bound macadam—																
(a) Broken rock metal	6,254-5	— 557-5	5,697-0	37-29	161-92	199-21	4,095-5	+ 1,035-1	5,130-6	13-89	60-76	74-65	10,827-6	273-86	351-0	..
(b) Kankar, laterite or brick metal ..	894-6	— 241-7	652-7	1-29	17-06	18-35	3,106-1	— 320-1	2,786-0	10-19	17-33	27-52	8,438-7	45-87	419-0	..
4. Lower types—																
(a) Using artificially admixed granular material, gravel, moorum, etc., on the natural soil.	119-1	— 3-2	115-7	0-09	0-41	0-50	3,241-5	+ 230-1	3,521-6	11-62	7-71	19-33	3,637-5	19-83	359-1	..
(b) Natural soil, motorable in fair weather.	553-5	— 4-6	548-7	..	0-79	0-79	3,429-6	+ 23-4	3,453-2	10-18	9-79	19-97	4,002-1	20-76	436-7	..
(c) Natural soil, unmotorable., ..	37-5	+ 5-2	42-7	1-10	0-10	1-20	2,669-2	— 609-6	2,059-4	17-19	7-09	24-28	2,102-3	25-48	394-7	..
Total (all types)	9,276-2	..	12,276-2	90-99	254-04	345-03	16,572-0	+ 465-6	17,037-6	63-59	104-51	118-10	26,314-0	513-13	1,960-7	..

A.R.H.D.—5A

NOTE.—Name the departments, other than Public Works Department or Highways Departments here.

2. The figures in columns (2) to (7) may include roads in Municipal areas maintained by the Public Works Department only if the data for such roads cannot be separated easily. To indicate where such data is or is not included in this statement, please cut out one or the other of the words *yes/no*.

3. "Not fully bridged" (column (16)) means there are interruptions to traffic for periods each exceeding twelve hours on more than six occasions in the year. The mileage of the entire section affected between two important stations (and not merely the part of the section affected) should be included in the figures in column (16).

*4. Where *trackways* are included in the figures given (against any of the types) in the main statement, please give the mileage of these *trackways* in the *remarks column* against the relevant entries in the statement.

This information is required to be collected in good time so that it may be submitted by the Head of the State Department concerned with roads by the first March of the year following that to which the information relates.

To

The Consulting Engineer to the Government of India (Roads),
Ministry of Transport (Roads Organization) Jammagar House,
Shahjehan Road, New Delhi-1.

for Chief Engineer, (Highways).

Form No. 1.

*Expenditure incurred on extra municipal roads maintained by
Public authorities during year ending 31st March 1953.*

("Extra-Municipal" means outside the area of jurisdiction of a Municipality, Town/City Corporation or like urban body.)

STATE.

(Figures to be rounded off to the nearest thousand rupees.)

Class of expenditure. (1)	Expenditure.		
	State. (2)	Local body. (3)	Total. (4)
	RS. 25,404	RS. 10,451	RS. 35,855
1. Maintenance, repairs and minor improvements.			
2. New constructions and improvements debited to Original Works (included improvements of surface except surface painting with tar or bitumen-first and subsequent treatment).	9,099	6,359	15,458
3. Administration and other expenses—			
(a) Establishment	2,489	1,074	3,563
(b) Tools and Plant	6,558	72	6,630
(c) Others (see note below)	..	..	..
Total (excluding loan charges) ..	43,550	17,956	61,506

4. Loan Charges—

Interest	..	..	..
Repayments (Principal or sinking fund) ..	..	..	..
Total (including loan charges) ..	..	..	..
Outstanding Highway DEBIT at the end of the financial year.	43,550	17,956	61,506

The amount of GRANTS from State revenues to Local Bodies for Roads.

(This amount is not included in column (2) as expenditure but expenditure out of the grants is included in column).

NOTE.—When the Engineering staff of Public Works Departments and Local Bodies are also employed on works other than roads, it is impossible to allocate "Administration and other expenses" accurately. In such cases, these charges may be estimated on the basis of a percentage and the percentage indicated on both maintenance and original works.

This information is to be collected and submitted by 1st March of the year following that to which the information relates, to:—

The Consulting Engineer (Roads), Ministry of Transport (Roads Organization), Jammagar House, Shahjehan Road, NEW DELHI.

STS- (15) 50.

Form No. 2.

*Sources of Expenditure incurred on road works for the
year ending 31st March 1953.*

STATE.

(Figures to be rounded off to the nearest thousand rupees.)

Source of expenditure. (1)	Expenditure.		
	State. (2)	Local body. (3)	Total. (4)
	RS. 2,929	RS. 1,058	RS. 3,987
Central Road Fund	2,929	1,058	3,987
State Revenues	35,314	2,679	37,993
Local Funds	..	14,219	14,219
Loans	..	..	..
Any other source to be specified here— Government of India for works on N. H.	5,307	..	5,307
Total ..	43,550	17,956	61,506

This information is required to be collected and submitted by the 1st March of the year following that to which the information relates, to:—

The Consulting Engineer (Roads), Ministry of Transport (Roads Organization), Jammagar House, Shahjehan Road, NEW DELHI.

*Statement showing the expenditure on the Municipal reaches
for 1952-53.*

Type of roads. (1)	Mileage. (2)	Expenditure on new construction. (3)	Expenditure on Maintenance. (4)	Total. (5)
	M. F.	RS. (IN LAKHS.)	RS. (IN LAKHS.)	RS. (IN LAKHS.)
I. Bituminous—				
a. Surface dressed with tar bitumen asphaltic hot or in form of cut backs or emulsion.	176.6	0.67	7.90	8.57
b. Grouted sheet asphaltic or any base, asphaltic concrete or macadam tar, concrete or macadam including carpets one inch thick or more.	4.0	0.91	..	0.91
II. Concrete—				
a. Cement concrete	34.0	5.27	0.78	6.05
b. Cement bound macadam	..	..	..	..
III. Water bound macadam—				
a. Broken Rock metal	51.6	0.31	2.23	2.54
b. Kanker, laterite or brick metal	..	..	..	..
IV. Lower types—Nil.				
Total ..	266.4	7.16	10.91	18.07

ANNEXURE 2.

Statement showing the cost of maintenance of roads since 1946-47.

Year.	Total mileage Government and District Board.	Total expenditure, Government and District Board.	Cost per mile.
	MILES.	RS.	RS.
1946-47	14,958 22,076 37,034	1,75,22,582 79,96,937 2,55,19,519	609
1947-48	15,024 22,025 37,049	2,62,03,053 91,54,213 3,53,57,266	954
1948-49	15,780 22,194 37,974	3,50,15,182 1,15,83,288 4,65,98,470	1,227
1949-50	15,460 22,587 38,047	3,37,91,000 1,29,85,735 4,67,76,735	1,224
1950-51	15,560 23,411 38,971	3,87,73,748 1,33,63,439 5,21,37,187	1,331
1951-52	15,599 24,957 40,556	4,16,35,671 1,41,82,154 5,58,17,825	1,376
1952-53	15,650 25,838 41,488	4,51,29,912 1,45,39,379 5,96,69,291	1,431
1953-54	8,604 17,301 25,905	2,61,25,692 83,43,187 3,44,68,869	1,33

NOTE.—The figures given for the year 1953-54 relate to Madras Residuary State.

ANNEXURE 3.

Classified cost of maintenance for the year 1953-54.

Classification. (1)	Government Roads.			District Board Roads.		
	Mileage. (2)	Maintenance expenditure. (3)	Cost per mile. (4)	Mileage. (5)	Maintenance expenditure. (6)	Cost per mile. (7)
	MILES.	RS.	RS.	MILES.	RS.	RS.
National Highways ..	1,065	47,64,401	4,474	..	..	..
Provincial Highways ..	1,651	56,93,826	3,448	..	..	..
Major District Roads ..	5,796 + 27	1,54,68,843	2,654	3,321	35,57,638	1,0
Other District Roads ..	87	1,98,612	2,283	5,057	26,02,868	5
Village Roads	..	..	..	8,686 + 237	21,82,681	2
Total ..	8,626	2,61,25,682	3,020	17,301	83,43,187	4

ANNEXURE 4.

Statement showing the length of roads maintained during the year 1953-54 as on 31st March 1954.

Serial number. (1)	Name of division. (2)	Highways Roads.					District Board Roads.				Works Public Department Roads. (12)	Municipal Roads. (13)	Grand total. (14)
		National Highways. (3)	Provincial Highways. (4)	Major District Road. (5)	Other District roads. (6)	Total. (7)	Major District Roads. (8)	Other District Roads. (9)	Village roads. (10)	Total. (11)			
Tiruchirappalli Circle.													
1	Chingleput	133	..	525	..	658	56	279	733	1,068 + 7	5	60	1,798
2	South Arcot	86	90	384	..	560	289	499	648	1,435 + 8	103	113	2,219
3	Nagapattinam	..	28	261	..	289	107	390	623	1,120 + 8	414	255	3,482
4	Tanjore,	..	73	327	..	400	256	258	482	996			
5	Tiruchirappalli ..	130	190	454	..	774	237	546	987	1,770	71	207	2,822
6	Madurai	110	67	466	..	643 + 5	258	162	857	1,267 + 132	15	281	2,343
7	Ramanathapuram ..	95	71	298	..	464 + 22	265	302	323	890 * + 24	..	216	1,616
8	Tirunelveli	85	97	276	..	458	478	129	423	1,030 + 58	13	162	1,721
	Madras City	..	..	..	..	..	..	..	..	..	3	531	534
	Total ..	639	616	2,991	..	4,273	1,945	2,555	5,076	9,576 + 237	624	1,825	16,535
Coimbatore Circle.													
10	North Arcot	104	73	474	5	656	123	457	401	936	1	178	1,821
11	Salem	81	62	239	9	391	165	354	289	808	.. } 155	155	2,679
12	Krishnagiri	122	..	298	2	422	253	336	314	903			
13	Erode	27	57	406	7	497	251	393	863	1,507	3	253	3,865
14	Coimbatore	50	138	341	..	529	203	264	609	1,076			
15	Palghat	42	145	419	..	606	50	183	277	510	10	198	2,206
16	Kozhikode	..	190	149	20	359	200	104	129	523			
17	Mangalore	..	266	396	27	689	109 P.H. 8	256	405	778	..	6	1,533
18	Ootacamund	..	104	83	17	204	9	65	323	397	..	140	746
	Total ..	426	1,035	2,805	87	4,353	1,376	2,502	3,610	7,488	14	995	12,850
	Grand total ..	1,065	1,651	5,796	87	8,624	3,321	5,057	8,686	17,301	638	2,820	29,385

NOTE.—(1) + 237 miles in Tiruchirappalli circle represents the roads newly formed during the year which have not been included in the respective category of roads such as National Highways, Provincial Highways, Major District Roads, etc.

(2) * 132 miles of newly formed roads in 1952-53 have not been included as the estimates of the works were not closed and these lengths were not also brought under maintenance during the year.

ANNEXURE 5.

Statement showing the various types of roads under different authorities as on 31st March 1954.

Serial number and name of circle and division.	Cement concrete roads.				Black-top roads.				Metalled roads.				Unmetalled roads.								
	Highways.	District Board.	Public Department.	Municipalities.	Total.	Highways.	District Board.	Public Department.	Municipalities.	Total.	Highways.	District Board.	Public Department.	Municipalities.	Total.	Grand total.					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
<i>Tiruchirappalli Circle.</i>																					
Chingleput ..	29	..	..	1	30	433	15	..	5	453	196	374	5	40	615	..	686	..	14	700	1,798
2 South Arcot ..	21	..	..	..	21	256	2	..	9	267	275	692	1	88	1,056	8	749	102	16	875	2,219
3 Nagapattinam ..	2	..	..	5	14	55	4	1	16	243	213	153	3	125	995	18	972	409	109	2,280	3,482
4 Tanjore ..	6	..	..	..	6	148	19	..	..	..	229	272	..	..	..	17	705	..	..	..	..
5 Tiruchirappalli ..	16	..	..	8	24	329	9	..	68	406	429	987	16	70	1,502	26	774	55	61	890	2,822
6 Madurai ..	27	..	..	7	34	274	39	..	67	380	321	598	6	100	1,025	26	762	9	107	904	2,343
7 Ramanathapuram ..	16	..	..	18	34	204	22	..	9	235	266	304	..	106	736	..	660	..	83	743	1,748*
8 Tirunelveli ..	14	..	..	44	58	137	30	..	7	194	237	823	5	47	1,162	..	235	8	64	307	1,721
9 Madras City ..	..	..	..	20	20	..	..	2	422	424	..	..	..	..	79	..	..	..	11	11	534
Total ..	131	..	1	103	235	1,856	140	3	603	2,602	2,216	4,263	37	654	7,170	69	5,543	583	465	6,660	16,667
<i>Coimbatore Circle.</i>																					
10 North Arcot ..	22	..	..	4	26	134	2	..	14	150	500	493	1	80	1,074	..	491	..	80	571	1,821
11 Salem ..	20	..	..	17	46	117	2	..	31	332	252	524	..	50	1,710	2	282	..	57	591	2,679
12 Krishnagiri ..	9	..	..	..	9	172	10	..	..	..	241	643	..	..	..	..	250	..	..	..	..
13 Erode ..	50	..	..	6	56	121	5	2	67	415	376	705	1	117	1,370	..	800	..	63	1,524	3,865
14 Coimbatore ..	..	..	..	..	..	218	..	..	..	..	261	410	..	..	..	..	661	..	..	..	..
15 Palghat ..	8	..	..	3	15	112	..	1	15	207	486	50	9	79	1,180	..	460	..	101	804	2,206
16 Kozhikode ..	4	..	..	..	..	79	..	..	..	..	276	280	..	..	..	..	243	..	3	388	1,533
17 Mangalore ..	..	..	..	..	..	109	..	..	15	124	571	402	..	48	1,021	9	376	..	18	263	746
18 Ootacamund ..	..	..	..	3	3	178	18	..	55	251	26	134	..	69	229	..	245	..	..	..	..
Total ..	113	..	..	33	146	1,240	39	3	197	1,479	2,989	3,641	11	443	7,084	11	3,808	..	322	4,141	12,850
Grand Total ..	244	..	1	136	381	3,096	179	6	800	4,081	5,205	7,904	48	1,097	14,264	80	9,351	583	787	10,801	29,517

* The figure 1,748 includes 182 miles formed during 1952-53 which were not shown in Annexure 4.

ANNEXURE 6.

Statement showing the lengths of various classes of roads improved or newly formed during the year 1953-54.

Serial number and name of division.	Cement concrete roads.				Black-top roads.				Metalled roads.				Unmetalled roads.								
	Highways.	District Boards.	Public Department. Works	Municipalities.	Total.	Highways.	District Boards.	Public Department. Works	Municipalities.	Total.	Highways.	District Boards.	Public Department. Works	Municipalities.	Total.	Grand total.					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Tiruchirappalli Circle.																					
1 Chingleput ..	..	..	..	..	..	120	4	..	1	125	9	111	..	..	111	..	7	..	..	7	243
2 South Arcot ..	5	..	..	..	5	91	1	..	2	94	..	30	..	..	39	..	8	..	..	8	146
3 Nagapattinam ..	..	..	..	..	..	37	2	..	10	112	..	13	..	6	19	..	..	..	..	..	..
4 Tanjore ..	..	..	..	..	..	55	6	..	..	..	..	79	..	..	..	..	..	..	..	..	..
5 Tiruchirappalli ..	..	..	..	..	..	38	1	..	2	46	..	..	..	12	91	..	..	..	..	..	..
6 Madurai ..	3	..	..	..	3	70	17	..	5	92	..	..	..	3	4	5	30+	..	..	35	172
7 Ramanathapuram ..	10	..	..	1	11	124	19	..	2	145	22	136	..	3	25	4	182	..	1	188	237
8 Tirunelveli ..	..	..	..	3	3	112	24	..	2	138	..	..	..	..	..	..	24	..	..	24	205
9 Madras City ..	..	..	..	..	..	..	..	..	13	13	..	..	..	..	..	..	58	..	..	58	335
Total ..	18	..	..	4	22	617	81	..	37	765	31	369	..	25	425	5	267	..	6	278	1,490
Coimbatore Circle.																					
10 North Arcot ..	4	..	..	1	5	68	1	..	4	73	..	19	..	..	..	..	57	..	..	57	135
11 Salem ..	..	..	..	..	..	74	5	..	4	170	..	14	..	..	38	..	16	..	..	16	224
12 Krishnagiri ..	..	..	..	..	..	87	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Erode ..	..	..	..	1	5	67	1	..	12	105	..	..	..	7	16	..	22	..	..	22	118
14 Coimbatore ..	..	..	..	..	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Palghat ..	..	..	..	..	1	13	..	..	3	41	..	..	..	3	3	..	..	..	..	..	..
16 Kozhikode ..	1	..	..	..	..	59	4	..	6	6	..	..	..	1	1	..	..	..	..	..	..
17 Mangalore ..	..	..	..	..	..	7	..	..	8	19	..	..	..	5	5	..	..	..	..	..	..
18 Ootacamund ..	..	..	..	..	..	423	13	..	37	473	5	42	..	16	63	..	109	..	..	109	656
Total ..	9	..	..	2	11	1,070	94	..	74	1,238	36	411	..	41	488	5	376	..	6	387	2,146
Grand total ..	27	..	..	6	33	1,070	94	..	74	1,238	36	411	..	41	488	5	376	..	6	387	2,146

* Nine miles of metalled roads were transferred to district board from Lower Bhavani Project.

† Three miles of unmetalled roads (cart tracks) were taken over to district board from the Revenue Department as per orders of the District Collector.

‡ The figure 30 miles includes a length of mile 11-2 taken over from the panchayats.

ANNEXURE 7.

Statement showing the length of roads taken over from the District Boards and Municipalities during 1953-54.

Tiruchirappalli Circle—Nil.
Coimbatore Circle—Nil.

ANNEXURE 8.

Road mileage analysis as on 31st March 1954—Government and District Board roads.

Classification.	Mileage (to the nearest mile).									
	Cement concrete roads.		Black-top roads.		Metalled roads.		Unmetalled roads.		Total.	
	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
National Highways ..	6	95	33	636	6	284	..	..	50	1,015
Provincial Highways ..	21	85	64	628	14	841	..	6	99	1,569
Major District Roads ..	7	30	80	1,765	34	6,396	..	305	121	8,996
Other District Roads ..	..	..	5	39	..	3,387	..	2,101	5	* 5,527
Village Roads ..	..	..	..	20	..	1,647	..	7,019	..	8,686
Total ..	34	210	187	3,088	54	13,055	..	9,431	275	25,784

* The figures includes 333 miles of new roads, which were not included under 'ODR' in Annexure 4 as they have not been correctly classified.

ANNEXURE 9.

Statement showing the appropriation and the outlay during 1953-54 relating to all heads of Civil Works—Highways only.

Service heads.	Original Works.		Repairs.		Total.	
	Appropriation.	Actual Outlay.	Appropriation.	Actual Outlay.	Appropriation.	Actual Outlay.
	(2)	(3)	(4)	(5)	(6)	(7)
(1)	RS.	RS.	RS.	RS.	RS.	RS.
First half-year.						
Residuary State—						
50. Civil Works—Ordinary Areas—						
Excluding Post-War Reconstruction—Communications..	..	19,82,689	..	1,28,45,803	..	1,39,28,492
Post-War Reconstruction—						
Communications	..	17,21,240	..	..	..	17,21,240
Establishment	..	..	..	..	..	* 30,85,073
Charges in England	..	..	..	..	..	..
Tools and Plant	..	..	..	..	..	16,71,474
Suspense	..	..	..	..	..	13,53,467
Total—50. Civil Works—Ordinary Areas	..	..	..	..	..	2,17,59,746
Total—50. Civil Works—Highways—Residuary State	..	..	..	..	..	2,17,59,746

RS. A. P.

* 31,82,874 5 4 relates to establishment charges. (This figure includes establishment portion relating to Andhra State as no allocation between the two States is possible.)

(—) 3,97,801 1 0 relates to establishment charges recoverable from Government departments others.

30,85,703 4 4

ANNEXURE 9—cont.

Statement showing the appropriation and the outlay during 1953-54 relating to all heads of Civil Works—Highways only—cont.

Service heads.	Original Works.		Repairs.		Total.	
	Appropriation.	Actual Outlay.	Appropriation.	Actual Outlay.	Appropriation.	Actual Outlay.
	(2)	(3)	(4)	(5)	(6)	(7)
(1)	RS.	RS.	RS.	RS.	RS.	RS.
Second half-year.						
50. Civil Works—Ordinary areas—						
Development Schemes—						
(i) Schemes included in the Five-Year Plan—						
Communications	19,05,700	16,27,604	..	..	19,05,700	16,27,604
Establishment	..	..	..	..	67,900	36,407
Tools and Plant	..	..	..	..	21,100	24,347
(ii) Other Development Schemes—						
Communications	..	..	..	..	..	..
Establishment	..	..	..	..	30,100	43,127
Tools and Plant	..	..	..	..	..	..
Total, Development Schemes ..	..	..	..	..	20,24,800	17,31,485
Other than Development Schemes—						
Communications	17,78,500	11,53,306	85,23,500	1,05,01,784	97,02,000	1,16,55,090
Establishment	..	..	..	..	9,32,600	† 13,91,697
Tools and Plant	..	..	..	..	14,23,700	15,29,494
Total, Other than Development Schemes ..	..	..	..	..	1,20,58,300	1,45,76,281
Suspense	..	..	..	..	..	1,28,773
Grand total ..	..	..	..	..	1,40,83,100	1,64,36,539
50. Civil Works—Union (Madras)—						
Communications	..	..	..	20,11,000	..	20,11,000
Andhra	..	..	..	..	..	..
Madras	..	..	..	40,40,516	..	40,40,516
Total ..	..	..	60,51,000	60,51,516	60,51,000	60,51,516
81. Civil Works—						
Communications	..	15,25,549	..	..	..	15,25,549
Andhra	..	..	..	..	..	..
Madras	..	18,46,302	..	..	..	18,46,302
Total ..	34,78,200	33,71,851	..	..	* 34,78,200	33,71,851

RS. A. P.

* 15,44,991 2 2 represents establishment portion.

(—) 1,53,293 10 6 represents direct charges recoverable on account of establishment from other Government departments, etc.

13,91,697 7 8

ANNEXURE 10.

(i) Statement showing in abstract Appropriation and Expenditure during 1953-54 (Second half-year) under all head of Civil Works—Highways only (Residuary State) and Union.

Finance heads.	Original appropriation.	Final appropriation.	Actual expenditure.
(1)	(2)	(3)	(4)
	RS.	RS.	RS.
Residuary State—			
50. Civil Works—Ordinary areas—Works and Repairs ..	..	..	..
Development Schemes—			
(i) Schemes included in the five-year plan	23,11,800	19,05,700	16,27,604
(ii) Other Development Schemes	..	..	..
Other than Development Schemes	86,23,500	97,02,000	1,16,55,090
Total, Works and Repairs ..	1,09,35,300	1,16,07,700	1,32,82,694
Ordinary Establishment—			
Development Schemes—			
(i) Schemes included in the Five-Year Plan	69,000	67,900	36,407
(ii) Other than Development Schemes	30,900	30,100	43,127
Other than Development Schemes	9,77,600	9,32,600	13,91,697
Total, Ordinary Establishment ..	10,77,500	10,30,600	14,71,231
Tools and Plant—			
Development Schemes—			
(i) Schemes included in the Five-Year Plan	2,40,200	21,100	24,347
(ii) Other Development Schemes	..	..	..
Other than Development Schemes	10,43,900	14,23,700	15,29,494
Total, Tools and Plant ..	12,84,100	14,44,800	15,53,841
Suspense Ordinary Areas	19,67,900	..	1,28,773
Total Suspense	19,67,900	..	1,28,773
Union —			
50. Civil Works—Union Works and Repairs	70,03,000	60,51,000	60,51,516
81. Capital Outlay—Union—Works	65,00,000	34,78,200	33,71,861
Total—Highways—State and Union ..	..	..	2,58,59,906

(ii) Statement showing the expenditure on Works and Repairs under Civil Works—50. Civil Works—State during 1953-54—Highways only.

Circle or Department.	State,	Non-Government Works (Deposit works).
	RS	RS.
Highways—		
First half-year	2,65,82,730	..
Second half-year	1,32,82,694	..

(i) Statement showing the division-wise particulars of Expenditure on Government Roads (State and Union), 1953-54.

Serial number and name of division.	Expenditure on original works.										Expenditure on repairs.				Tools and plant.	Total.
	Ex-P.W.R.					P.W.R.					Ex-P.W.R.				Avenues.	Total.
	N.H. (2)	P.H. (3)	M.D.R. (4)	O.D.R. (5)	N.H. (6)	P.H. (7)	M.D.R. (8)	O.D.R. (9)	N.H. (10)	P.H. (11)	M.D.R. (12)	O.D.R. (13)	N.H. (14)	P.H. (15)		
Tiruchirappalli Circle.																
1 Chingleput ..	324	..	2,86,332	..	7,00,105	..	2,90,248	..	5,76,235	..	17,50,679	..	69,707	1,35,061	38,83,781	
2 South Arcot ..	..	3,15,823	4,456	..	..	89,503	2,20,800	..	2,37,273	1,76,213	8,47,151	23,331	40,035	1,40,270	20,95,455	
3 Nagapattinam ..	..	..	653	..	..	..	1,779	..	..	2,19,023	10,02,111	..	9,738	72,544	13,05,853	
4 Tanjore ..	..	1,02,996	3,777	..	..	5,760	1,82,353	..	..	3,38,459	9,76,259	11,607	15,583	92,553	17,29,877	
5 Tiruchirappalli ..	..	18,078	..	..	24,824	..	1,64,242	..	5,30,177	6,03,779	11,77,194	31,209	54,984	1,75,303	27,79,790	
6 Madurai ..	..	..	37,953	..	962	1,42,324	1,23,424	..	4,49,494	3,67,954	17,88,122	243	3,365	2,46,163	31,60,309	
7 Ramanathapuram ..	..	5,93,705	9,053	..	4,62,154	2,440	18,396	..	3,07,027	2,20,742	9,60,646	10,662	14,058	1,69,291	27,34,774	
8 Tirunelveli ..	..	23,225	..	..	8)	2,700	33,555	..	3,59,473	3,56,132	8,80,867	26,255	14,376	1,46,640	18,43,292	
9 Coleroon Bridge Division ..	..	..	..	..	..	..	1,53,429	..	..	..	..	..	..	144	1,53,573	
10 Transport and Machinery Division.	..	..	..	..	..	2,373	..	..	..	..	..	..	..	..	9,77,343	9,79,716
Total ..	324	10,23,827	3,39,234	..	1,83,224	2,44,700	11,83,726	..	24,59,679	22,82,332	94,13,023	1,03,307	2,22,426	21,55,612	2,06,21,420	
Coimbatore Circle.																
11 North Arcot ..	..	89,054	8,787	..	— 6,647	1,058	20,495	..	7,33,491	2,81,148	7,64,113	8,470	63,763	1,038	19,66,775	
12 Salem ..	..	..	..	..	1,23,730	2,174	23,144	..	5,66,998	2,48,569	3,77,869	16,733	34,700	1,00,370	14,94,337	
13 Krishnagiri ..	..	..	4,753	..	11,841	..	9,146	..	4,76,528	..	..	13,133	19,116	1,12,052	12,53,252	
14 Erode ..	..	1,037	2,344	..	..	— 123	40,883	..	1,47,472	1,79,730	10,13,045	7,816	61,422	1,24,643	15,78,269	
15 Coimbatore ..	..	1,207	20,185	..	1,21,2-3	57,776	92,201	..	1,68,458	2,96,434	7,52,202	2,661	4,869	1,48,576	16,65,852	
16 Ootacamund ..	..	..	..	..	..	4	— 93	..	..	1,47,089	1,69,180	9,038	..	45,607	3,70,726	
17 Palghat ..	..	41,334	49,075	..	..	21,393	53,025	..	2,09,775	5,72,489	9,31,133	13,880	3,204	1,43,569	20,83,877	
18 Kozhikode ..	..	64,993	3,40,814	..	..	64,595	39,507	..	..	8,30,665	3,26,200	..	2,049	97,204	17,66,029	
19 Mangalore ..	..	92,808	1,30,022	..	..	4,76,001	5,65,324	..	..	8,55,370	11,15,392	23,574	1,383	1,53,865	34,13,937	
Total ..	..	2,90,433	5,55,985	..	2,50,260	6,22,883	8,43,827	— 94	23,04,722	34,11,494	60,55,814	95,305	1,90,511	9,26,914	1,55,48,054	
Grand total ..	324	13,14,860	8,95,219	..	14,38,484	8,67,583	20,32,553	— 94	47,64,401	56,93,826	1,54,68,843	1,98,612	4,12,937	30,82,526	3,61,69,474	

(ii) Statement showing the division-wise Expenditure on District Board Road and non-road works.

Serial number and name of division.	Expenditure on original works—Road works.										Maintenance.				Non-road works.	Total.
	Excluding Post-war Reconstruction.					Post-war Reconstruction.					Major district roads.				Avenues.	Total.
	Major district roads.	Other district roads.	Village roads.	Major district roads.	Other district roads.	Village roads.	Major district roads.	Other district roads.	Village roads.	Major district roads.	Other district roads.	Village roads.	Major district roads.	Other district roads.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Tiruchirappalli Circle.																
1 Chingleput ..	..	1,33,944	63,386	2,943	16,800	63,035	25,003	1,42,855	2,54,211	5,400	80,880	8,89,576	..	..	..	..
2 South Arcot ..	45,921	11,320	1,11,263	73,433	21,737	57,106	3,11,237	2,87,893	1,84,972	16,737	2,99,022	14,20,191	..	..	..	..
3 Nagapattinam ..	2,882	55,170	43,762	83,355	27,513	51,933	77,405	73,600	84,239	3,920	66,097	5,19,956	..	..	..	..
4 Tanjore ..	51,107	574	1,79,435	18,239	11,420	18,320	2,83,907	79,963	18,983	4,252	2,60,916	9,27,176	..	..	..	..
5 Tiruchirappalli ..	..	..	62,748	..	..	77,006	3,26,928	3,07,556	2,07,009	30,702	1,88,294	11,01,333	..	..	..	..
6 Madurai ..	..	..	2,21,766	..	..	2,56,733	3,78,310	1,89,609	3,07,470	..	5,52,227	18,47,120	..	..	..	..
7 Ramanathapuram ..	3,40,354	22,113	78,836	25,330	32,310	34,123	3,28,748	2,25,098	1,42,093	16,821	49,657	12,95,483	..	..	..	..
8 Tirunelveli ..	4,14,234	1,23,847	2,67,535	1,40,123	6,723	10,111	7,49,568	1,02,070	1,73,930	7,011	1,59,062	21,68,224	..	..	..	..
9 Coleroon Bridge Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8,54,498	4,01,963	10,28,721	3,43,458	1,16,517	5,78,472	23,82,156	13,49,144	13,22,937	85,033	16,56,155	1,01,19,050	..	..	..	..
Coimbatore Circle.																
10 North Arcot ..	1,162	17,556	61,306	14,347	7,163	63,437	70,200	1,32,200	85,006	9,536	2,13,443	7,25,367	..	..	..	..
11 Salem ..	..	83,893	48,798	..	..	98,554	1,51,677	1,67,226	77,583	18,590	37,897	6,83,755	..	..	..	..
12 Krishnagiri ..	..	37,636	6,981	1	2,360	21,347	2,00,865	1,71,480	78,781	2,170	40,373	6,08,756	..	..	..	..
13 Erode ..	3,447	4,392	4,900	904	..	20,790	2,97,255	2,36,199	1,85,589	5,096	2,04,331	9,61,012	..	..	..	..
14 Coimbatore ..	— 7,811	..	6,757	9,232	26,558	96,131	1,62,395	1,02,312	2,17,760	1,018	1,98,170	8,97,682	..	..	..	..
15 Ootacamund ..	..	12,120	49,900	13,822	22,678	..	6,397	22,909	66,176	..	1,03,013	2,97,020	..	..	..	..
16 Palghat ..	..	..	29,738	..	6,654	7,309	44,727	1,02,800	47,199	1,761	2,63,833	5,04,021	..	..	..	..
17 Kozhikode ..	7,575	..	22,122	3,509	6,722	14,742	1,97,344	90,406	21,672	266	1,44,801	5,09,159	..	..	..	..
18 Mangalore ..	..	..	12,643	..	..	78,724	38,709	88,186	81,943	..	..	3,06,108	..	..	..	..
Total ..	46,064	1,55,152	2,43,205	41,815	72,149	4,01,123	11,75,482	12,53,724	8,59,744	38,446	12,00,866	54,87,830	..	..	..	..
Grand total ..	9,00,562	5,57,120	12,71,936	3,85,273	1,83,661	9,79,595	35,57,638	26,02,863	21,82,681	1,23,479	28,57,021	1,56,06,589	..	..	..	..

(iii) Statement showing the Progress achieved on Post-war Road Development

(Five-Year Plan of the Planning

State Highways (Government Roads).

Serial number and name of Division.	Cement concreting.		Black-top surfacing.		New formation (including cost of acquisition and widening of existing roads).		Metalling.		Major bridges.
	Quantity.		Quantity.		Quantity.		Quantity.		Amount.
	Amount.		Amount.		Amount.		Amount.		
	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	RS. IN LAKHS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Chingleput	..	..	4 0	1.74	..	..	..	..	0.51
2 South Arcot	1 1/2	0.85	..	..	..	..	5 4	0.42	0.16
3 Tiruchirappalli ..	..	..	..	..	..	..	..	..	0.85
4 Tanjore, East	..	..	..	..	..	..	..	..	..
5 Tanjore, West	..	..	..	..	..	0.02	..	..	1.62
6 Madurai	2 6	2.01	19 0	2.50	..	0.01	..	..	..
7 Ramanathapuram ..	..	..	..	..	..	..	..	..	0.12
8 Tirunelveli	..	..	..	..	..	..	..	..	..
9 Coleroon	..	..	..	..	..	..	..	..	2.95*
10 North Arcot	..	..	..	..	..	—0.01	..	..	0.23
11 Salem, North ..	..	..	..	..	..	..	..	..	0.01
12 Salem, South ..	..	..	..	—0.01	..	0.07	..	0.12	0.07
13 Coimbatore, North ..	..	..	..	..	..	..	..	..	..
14 Coimbatore, South ..	1 3	0.55	..	0.01	..	..	..	..	..
15 The Nilgiris	..	..	..	..	..	..	..	..	..
16 Malabar, North ..	..	..	..	1.03	..	0.09	..	..	0.45
17 Malabar, South ..	..	..	..	..	..	3.45 ‡	..	..	..
18 South Kanara	..	..	..	0.65	..	..	..	..	6.17
19 Bharathapuzha ..	..	..	..	..	..	..	..	..	4.06
Total	5 1 1/2	3.41	23 0	5.92	..	3.63	5 4	0.54	17.20

Works—Roads other than National Highways during the year 1953-54.

Commission—Road Development).

State Highways (Government Roads)		Other roads (District Board roads).						Remarks.		
—cont.		New formation (including cost of acquisition and widening of existing roads).		Metalling.		Major bridges.			Minor bridges, culverts, road dams, and other improvements like strengthening and widening, etc.	
Minor bridges, culverts, road dams and other improvements like, strengthening and widening.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Amount.	Amount.		Minor bridges, culverts, road dams, and other improvements like strengthening and widening, etc.	Amount.
RS. IN LAKHS.	(11)	M. F. (12)	RS. IN LAKHS. (13)	M. F. (14)	RS. IN LAKHS. (15)	RS. IN LAKHS. (16)	RS. IN LAKHS. (17)		(18)	
0.66	16 1	0.53	14 0	0.20	0.03	..	..			
1.40	..	0.53	..	0.35	0.44	0.19	..			
..	6 0	0.78	..	..	..	..	..			
..	4 4	0.12	10 0	0.98	0.47	0.04	..			
..	..	0.13	..	0.30	0.47	0.04	..			
0.01	13 1½	2.65	..	..	..	..	..			
..	8 0	0.74	..	..	0.15	0.03	..			
0.35	68 4	1.66	..	..	0.28	..	..			
..	..	..	..	..	..	..	..			
..	..	0.85	..	..	..	..	..			
..	6 0	0.21	..	..	0.03	..	..			
..	..	..	..	..	..	0.98	..			
0.47	22 1	0.24	..	..	..	..	..			
0.18	54 1	0.87	..	..	..	0.42	..			
..	..	0.07	..	0.01†	0.11	0.25	..			
0.27	..	0.18	..	..	..	0.07	..			
0.26	5 4	0.17	..	..	..	..	..			
1.87	..	0.71	2 0	0.09	..	..	..			
..	..	..	..	..	..	..	..			
5.57	204 ½	10.44	26 0	1.93	1.53	1.98	..			

ANNEXURE 12.

Statement showing the figures under "XXXIX—Civil Works—Rents and Miscellaneous, 1953-54.

HIGHWAYS DEPARTMENT.

Hheads of accounts. (1)	Actuals.	
	First half-year. (2)	Second half-year. (3)
	RS.	RS.
XXXIX. Civil Works—		
State Rents	3,632	5,739
Miscellaneous —		
Contribution towards leave salary of officers lent to foreign service.	1,639	390
Other receipts	87,425	2,12,917
Total ..	92,696	2,19,046

.B.—(1) The figures include treasury transaction also.
 (2) (a) "Rents" represents recoveries of rent for occupation of Inspection Bungalows and residential buildings.
 (b) "Other receipts" includes rent for lease of land and road margins, value of stores found surplus, fines realised, lapsed deposits and all other transactions which are not appropriately classifiable under other heads.

ANNEXURE 13.

Statement of expenditure on roads classified according to categories of roads.

Categories of roads. (1)	Government.				District board.			
	Capital works.		Repairs. (4)	Total. (5)	Capital works.		Repairs. (8)	Total. (9)
	Ex-P.W.R. (2) RS.	P.W.R. (3) RS.			Ex-P.W.R. (6) RS.	P.W.R. (7) RS.		
1. Chingleput—								
National Highways ..	324	7,00,195	5,76,235	12,76,754	..	..	..	..
Provincial Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	2,86,332	2,90,248	17,80,679	23,57,259	..	2,943	25,993	28,936
Other District Roads ..	..	..	..	..	1,83,944	16,809	1,42,855	3,43,608
Village Roads ..	..	..	..	..	63,386	63,035	2,54,241	3,80,662
Total ..	2,86,656	9,90,443	23,56,914	36,34,013	2,47,330	82,787	4,23,089	7,53,206
2. South Arcot—								
National Highways ..	..	..	2,37,273	2,37,273	..	..	..	..
Provincial Highways ..	3,15,823	89,503	1,76,213	5,81,539	..	..	..	..
Major District Roads ..	4,456	2,20,800	8,47,151	10,72,407	45,921	73,433	3,11,237	4,30,591
Other District Roads ..	..	..	23,331	23,331	11,320	21,737	2,87,393	3,20,450
Village Roads ..	..	..	..	..	1,11,253	57,166	1,84,972	3,53,391
Total ..	3,20,279	3,10,303	12,83,968	19,14,550	1,68,494	1,52,336	7,83,602	11,04,432
3. Nagapattinam—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	..	..	2,19,023	2,19,023	..	..	..	..
Major District Roads ..	658	1,779	10,02,111	10,04,548	2,882	83,385	77,405	1,63,672
Other District Roads ..	..	..	..	..	55,170	27,513	73,600	1,56,283
Village Roads ..	..	..	..	..	43,762	51,983	34,239	1,29,984
Total ..	658	1,779	12,21,134	12,23,571	1,01,814	1,62,881	1,85,244	4,99,934

ANNEXURE 13—cont.

Statement of expenditure on roads classified according to categories of roads—cont.

Categories of roads. (1)	Government.				District board.			
	Capital works.		Repairs. (4)	Total. (5)	Capital works.		Repairs. (8)	Total. (9)
	Ex-P.W.R. (2) RS.	P.W.R. (3) RS.			Ex-P.W.R. (6) RS.	P.W.R. (7) RS.		
Tanjore—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	1,02,996	5,760	3,38,489	4,47,245	..	..	..	..
Major District Roads ..	3,777	1,82,853	9,76,259	11,62,889	51,107	18,239	2,83,967	3,53,313
Other District Roads ..	..	..	11,607	11,607	574	11,420	79,963	91,957
Village Roads ..	..	..	..	..	1,79,435	18,320	18,983	2,16,738
Total ..	1,06,773	1,88,613	13,26,355	16,21,741	2,31,116	47,979	3,82,913	6,62,008
Tiruchirappalli—								
National Highways ..	..	24,824	5,30,177	5,55,001	..	..	..	..
Provincial Highways ..	18,078	..	6,03,779	6,21,857	..	..	..	..
Major District Roads ..	..	1,64,242	11,77,194	13,41,436	..	..	2,26,928	2,26,928
Other District Roads ..	..	..	31,209	31,209	..	..	3,07,556	3,07,556
Village Roads ..	..	..	..	..	62,748	77,996	2,07,009	3,47,753
Total ..	18,078	1,89,066	23,42,359	25,49,503	62,748	77,996	7,41,493	8,82,237
Madurai—								
National Highways ..	..	962	4,49,494	4,50,456	..	..	..	..
Provincial Highways ..	..	1,42,324	3,67,954	5,10,278	..	..	..	..
Major District Roads ..	37,958	1,23,424	17,88,122	19,49,504	..	..	3,78,310	3,78,310
Other District Roads ..	..	..	243	243	..	..	1,30,609	1,30,609
Village Roads ..	..	..	..	..	2,21,766	2,56,738	3,07,470	7,85,974
Total ..	37,958	2,66,710	26,05,813	29,10,481	2,21,766	2,56,738	8,16,389	12,94,893
Ramanathapuram—								
National Highways ..	..	4,62,154	3,07,027	7,69,181	..	..	..	..
Provincial Highways ..	5,63,705	2,040	2,20,742	7,86,487	..	..	..	..
Major District Roads ..	6,053	18,396	9,60,646	9,85,095	3,40,354	25,330	3,28,748	6,94,432
Other District Roads ..	..	..	10,662	10,662	22,113	32,310	2,25,098	2,79,521
Village Roads ..	..	..	..	..	78,836	34,123	1,42,093	2,55,052
Total ..	5,69,758	4,82,590	14,99,077	25,51,425	4,41,303	91,763	6,95,939	12,29,005
Tirunelveli—								
National Highways ..	..	89	3,59,473	3,59,562	..	..	..	..
Provincial Highways ..	23,225	2,700	3,56,132	3,82,057	..	..	..	..
Major District Roads ..	..	33,555	8,80,867	9,14,422	4,14,234	1,40,128	7,49,569	13,03,930
Other District Roads ..	..	..	26,255	26,255	1,28,847	6,728	1,02,070	2,37,645
Village Roads ..	..	..	..	..	2,67,535	19,111	1,73,930	4,60,676
Total ..	23,225	36,344	16,22,727	16,82,296	8,10,616	1,65,967	10,25,568	20,02,151
Coleroon Bridge—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	..	1,53,429	..	1,53,429	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	1,53,429	..	1,53,429	..	..	..	..
Transport and Machinery Division—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	..	2,373	..	2,373	..	..	..	..
Major District Roads ..	..	..	..	..	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	2,373	..	2,373	..	..	..	..

ANNEXURE 13—cont.

Statement of expenditure on roads classified according to categories of roads—cont.

Categories of roads.	Government.				District board.			
	Capital works.		Repairs.	Total.	Capital works.		Repairs.	Total.
	Ex-P.W.R.	P.W.R.			Ex-P.W.R.	P.W.R.		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1)	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
11. Designs Division—				Nil.				
12. North Arcot—								
National Highways ..	..	(—) 6,647	7,35,491	7,28,844	..	..	..	..
Provincial Highways ..	89,054	1,058	2,81,148	3,71,260	..	..	..	..
Major District Roads ..	8,787	20,495	7,64,113	7,93,395	1,162	14,347	70,200	85,709
Other District Roads ..	..	..	8,470	8,470	17,556	7,168	1,82,206	2,06,930
Village Roads ..	..	..	..	..	61,306	63,437	85,006	2,09,749
Total ..	97,841	14,906	17,89,222	19,01,969	80,024	84,952	3,37,412	5,02,388
13. Salem—								
National Highways ..	..	1,23,780	5,66,998	6,90,778	..	..	..	..
Provincial Highways ..	..	2,174	2,48,569	2,50,743	..	..	..	..
Major District Roads ..	..	23,144	3,77,869	4,01,013	..	..	..	..
Other District Roads ..	..	..	16,733	16,733	83,398	..	1,51,677	1,51,677
Village Roads ..	..	..	..	..	48,798	98,584	1,67,226	2,50,624
Total ..	..	1,49,098	12,10,169	13,59,267	1,32,196	98,584	3,96,488	6,27,268
14. Krishnagiri—								
National Highways ..	..	11,844	4,76,528	4,88,372	..	..	..	..
Provincial Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	4,758	9,146	6,06,675	6,20,579	41,691	1	2,00,865	2,42,557
Other District Roads ..	..	..	13,133	13,133	37,686	2,369	1,71,480	2,11,632
Village Roads ..	..	..	..	..	6,981	21,347	78,784	1,07,115
Total ..	4,758	20,990	10,96,336	11,22,084	86,358	23,717	4,51,129	5,61,204
15. Coimbatore—								
National Highways ..	..	1,21,283	1,68,458	2,89,741	..	..	..	..
Provincial Highways ..	1,207	57,776	2,96,434	3,55,417	..	..	..	..
Major District Roads ..	20,185	92,201	7,52,202	8,64,588	(—) 7,811	9,232	1,62,395	1,63,816
Other District Roads ..	..	..	2,661	2,661	..	26,558	1,92,312	2,18,879
Village Roads ..	..	..	..	..	6,787	96,181	2,17,790	3,20,758
Total ..	21,392	2,71,260	12,19,755	15,12,407	(—) 1,024	1,31,971	5,72,497	7,03,444
16. Erode—								
National Highways ..	..	..	1,47,472	1,47,472	..	..	..	..
Provincial Highways ..	1,037	(—) 123	1,79,730	1,80,644	..	..	..	..
Major District Roads ..	2,344	40,883	10,13,045	10,56,272	3,447	904	2,97,265	3,01,616
Other District Roads ..	..	..	7,816	7,816	4,392	..	2,36,199	2,40,591
Village Roads ..	..	..	..	..	4,990	20,799	1,83,589	2,09,378
Total ..	3,381	40,760	13,48,063	13,92,204	12,829	21,708	7,17,053	7,51,585
17. Palghat—								
National Highways ..	..	..	2,09,775	2,09,775	..	..	..	..
Provincial Highways ..	41,334	21,398	5,72,489	6,35,221	..	..	..	..
Major District Roads ..	49,075	53,025	9,31,138	10,33,238	..	..	44,727	44,727
Other District Roads ..	..	..	13,880	13,880	..	6,654	1,02,800	1,09,454
Village Roads ..	..	..	..	..	29,738	7,309	47,199	84,246
Total ..	90,409	74,423	17,27,282	18,92,114	29,738	13,963	1,94,726	2,38,427

Statement of expenditure on roads classified according to categories of roads—cont.

Categories of roads.	Government.				District board.			
	Capital works.		Repairs.	Total.	Capital works.		Repairs.	Total.
	Ex-P.W.R.	P.W.R.			Ex-P.W.R.	P.W.R.		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1)	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
8. Kozhikode—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	64,993	64,595	8,30,665	9,60,253	..	..	..	..
Major District Roads ..	3,40,814	33,507	3,26,200	7,08,521	7,575	3,509	1,97,344	2,08,428
Other District Roads ..	..	..	..	..	..	6,722	90,406	97,123
Village Roads ..	..	..	..	..	22,122	14,742	21,672	58,536
Total ..	4,05,897	1,04,102	11,56,865	16,66,774	29,697	24,973	3,09,422	3,64,092
9. South Kanara—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	92,808	4,76,001	8,55,370	14,24,179	..	..	5,903	5,903
Major District Roads ..	1,30,022	5,65,524	11,15,392	18,10,938	..	..	38,709	38,709
Other District Roads ..	..	..	23,574	23,574	..	..	88,116	88,116
Village Roads ..	..	..	..	..	12,643	78,724	81,943	1,73,310
Total ..	2,22,830	10,41,525	19,94,336	32,58,691	12,648	78,724	2,14,741	3,06,108
10. The Nilgiris—								
National Highways ..	..	..	..	..	..	..	..	..
Provincial Highways ..	..	4	1,47,089	1,47,093	..	..	..	..
Major District Roads ..	..	(—) 98	1,69,180	1,69,082	..	13,822	6,397	29,216
Other District Roads ..	..	(—) 94	9,038	8,944	12,120	22,678	22,909	57,707
Village Roads ..	..	..	..	..	49,900	..	66,176	1,18,076
Total ..	..	(—) 188	3,25,307	3,25,119	62,020	38,500	95,482	1,94,002

ANNEXURE 13 (a).

Statement showing the total expenditure incurred on each category of roads under Government and District Boards in respect of Original and Repair Works.

Serial number and name of circle and division.	National Highways.			Provincial Highways.			
	Government.	District Board.	Total.	Government.	District Board.	Total.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	RS.
<i>Tiruchirappalli Circle.</i>							
1 Chingleput	..	12,76,764	..	..	..	..	..
2 South Arcot	..	2,37,273	..	5,81,539	..	..	5,81,539
3 Nagapattinam	..	..	..	2,19,023	..	..	2,19,023
4 Tanjore	..	..	..	4,47,245	..	..	4,47,245
5 Tiruchirappalli	..	5,55,091	..	6,21,857	..	..	6,21,857
6 Madurai	..	4,50,456	..	5,10,278	..	..	5,10,278
7 Ramanathapuram	..	7,69,181	..	7,86,487	..	..	7,86,487
8 Tirunelveli	..	3,59,562	..	3,82,057	..	..	3,82,057
9 Coleroon Bridge Division	..	..	..	..	..	..	..
10 Transport and Machinery Division	..	..	..	2,373	..	..	2,373
Total	..	36,48,227	..	35,50,859	..	..	35,50,889
<i>Coimbatore Circle.</i>							
11 North Arcot	..	7,28,844	..	3,71,266	..	..	3,71,266
12 Salem	..	6,90,778	..	2,50,743	..	..	2,50,743
13 Krishnagiri	..	4,88,372	..	..	..	..	..
14 Erode	..	1,47,142	..	1,80,644	..	..	1,80,644
15 Coimbatore	..	2,89,741	..	3,55,417	..	..	3,55,417
16 Ootacamund	..	..	..	1,47,093	..	..	1,47,093
17 Palghat	..	2,09,775	..	6,35,221	..	..	6,35,221
18 Kozhikode	..	..	..	9,60,253	..	..	9,60,253
19 Mangalore	..	..	..	14,24,179	5,903	..	4,80,082
Total	..	25,54,982	..	43,21,810	5,903	..	43,30,713
Grand total	..	62,03,209	..	78,75,669	5,903	..	78,81,572

Statement showing the total expenditure incurred on each category of roads under Government and District Boards in respect of Original and Repair Works—cont.

Serial number and name of circle and division.	Major District Roads.			Other District Roads.			Village Roads.		
	Government.	District Board.	Total.	Government.	District Board.	Total.	Government.	District Board.	Total.
	(8) RS.	(9) RS.	(10) RS.	(11) RS.	(12) RS.	(13) RS.	(14)	(15) RS.	(16) RS.
<i>Tiruchirappalli Circle.</i>									
1 Chingleput	23,57,259	28,936	23,86,195	..	3,43,608	3,43,608	..	3,80,602	3,80,602
2 South Arcot	10,72,407	4,30,591	15,02,998	23,331	3,20,450	3,43,781	..	3,53,391	3,53,391
3 Nagapattinam	10,04,548	1,63,672	11,68,220	..	1,56,283	1,56,283	..	1,29,984	1,29,984
4 Tanjore	11,62,389	3,53,813	15,16,202	11,607	91,637	1,03,564	..	2,16,738	2,16,738
5 Tiruchirappalli	13,41,436	2,26,928	15,68,364	21,209	3,07,556	3,28,765	..	3,47,753	3,47,753
6 Madurai	19,49,504	3,78,310	23,27,814	243	1,30,609	1,30,852	..	7,85,974	7,85,974
7 Ramanathapuram	9,85,095	6,94,432	16,79,527	10,662	2,79,521	2,90,183	..	2,55,052	2,55,052
8 Tirunelveli	9,14,422	13,03,930	22,18,352	26,255	2,37,645	2,63,900	..	4,60,576	4,60,576
9 Coleroon Bridge Division	1,53,429	..	1,53,429	..	..	..	..	..	..
10 Transport and Machinery Division	..	..	..	..	..	..	..	..	..
Total	1,09,40,989	35,80,112	1,45,21,101	1,03,307	18,67,629	19,70,936	..	29,30,130	29,30,130
<i>Coimbatore Circle.</i>									
11 North Arcot	7,93,395	85,709	8,79,104	8,470	2,06,930	2,15,400	..	2,09,749	2,09,749
12 Salem	4,01,013	1,51,677	5,52,690	16,733	2,50,624	2,67,357	..	2,24,967	2,24,967
13 Krishnagiri	6,20,579	2,42,657	8,63,136	13,133	2,11,335	2,24,668	..	1,07,112	1,07,112
14 Erode	10,56,272	3,01,616	13,57,888	7,816	2,40,591	2,48,407	..	2,09,378	2,09,378
15 Coimbatore	8,64,588	1,63,816	10,28,404	2,661	2,18,870	2,21,531	..	3,20,758	3,20,758
16 Ootacamund	1,69,082	20,219	1,89,301	8,944	57,707	66,651	..	1,16,076	1,16,076
17 Palghat	10,33,238	44,727	10,77,965	13,880	1,09,454	1,23,334	..	84,246	84,246
18 Kozhikode	7,06,521	2,08,428	9,14,949	..	97,128	97,128	..	58,536	58,536
19 Mangalore	18,10,938	38,709	18,49,607	23,574	88,186	1,11,760	..	1,73,310	1,73,310
Total	74,55,626	12,57,458	87,13,084	95,211	14,81,025	15,76,236	..	15,04,132	15,04,132
Grand total	1,83,96,615	48,37,570	2,32,34,185	1,98,518	33,48,654	35,47,172	..	44,34,262	44,34,262

ANNEXURE 13 (b).

Statement showing Divisionwise Expenditure and Lapses of Grant on Government Roads.

(1)	Serial number and name of division.	Original works.			Maintenance works.			
		Final allotment.	Expenditure.	Lapse.	Final allotment.	Minimum allotment required for the proper maintenance of road.	Expenditure.	Lapse.
		(2)	(3)	(4)	(5)	(6)	(7)	(8)
		RS.	RS.	RS.	RS.	RS.	RS.	
		<i>Tiruchirappalli Circle.</i>						
1	Chingleput ..	11,34,500	12,77,099	..	11,12,000	23,30,456	23,56,914	..
2	South Arcot ..	5,51,530	6,30,582	..	8,11,905	19,55,492	12,81,968	..
3	Nagapattinam ..	7,000	2,437	4,563	9,71,450	12,25,399	12,21,134	..
4	Tanjore ..	2,05,650	2,95,386	..	10,21,300	16,53,029	13,76,355	..
5	Tiruchirappalli ..	3,10,250	2,07,144	1,03,106	15,39,150	13,04,431	23,42,359	..
6	Madurai ..	3,15,600	3,04,668	10,932	17,99,955	17,22,078	26,05,813	..
7	Ramanathapuram ..	8,62,680	10,93,348	..	9,50,315	15,69,698	14,99,077	..
8	Tirunelveli ..	1,10,650	59,569	51,081	10,96,020	11,63,219	16,22,727	..
9	Coleroon Bridge Division ..	3,64,100	1,53,429	2,10,671	..	..	..	..
10	Transport and Machinery Division ..	..	2,373	..	..	..	..	..
11	Designs Division ..	..	..	..	..	..	..	..
	Total ..	38,61,960	38,85,035	..	93,02,095 * 5,72,231	1,29,23,802	1,42,58,347	..
		<i>Coimbatore Circle.</i>						
12	North Arcot ..	1,24,300	1,12,747	11,553	13,22,600	16,33,846	17,89,222	..
13	Salem ..	4,06,420	1,49,098	2,57,322	8,63,385	10,46,669	12,10,169	..
14	Krishnagiri ..	64,450	25,748	38,702	7,03,565	6,78,403	10,96,336	..
15	Erode ..	55,300	44,141	14,159	11,44,515	22,11,655	13,48,063	..
		<i>Coimbatore Circle.</i>						
16	Coimbatore ..	2,88,550	2,92,652	..	8,64,890	15,05,075	12,19,755	..
17	Ootacamund ..	2,500	— 188	2,312	2,26,950	5,90,191	3,25,307	..
18	Palghat ..	5,61,850	1,64,832	3,97,018	14,17,975	21,95,337	17,27,282	..
19	Kozhikode ..	6,29,500	5,09,909	1,88,491	8,54,150	20,92,276	11,56,865	..
20	Mangalore ..	9,52,300	12,64,355	..	15,42,470	14,56,352	19,94,336	..
	Total ..	30,88,470	25,63,294	6,23,576	89,40,500 * 7,11,443	1,31,09,804	1,18,67,335	..
	Reserves with C.E. (H) & S.E. (H)	..	..	..	† 1,52,100	..	..	..
	Public Works Department Circles	..	..	..	63,200	..	..	..
	Grand Total ..	69,50,430	64,48,323	5,02,101	1,97,41,569	2,63,33,606	2,61,25,682	..

NOTE.—(1) * Figures are the allotment made circlewise under National Highways during the second half of the year 1953-54 for which divisionwise details are not available.
(2) † The amounts are kept under reserve during the first half year prior to partition of Andhra State.

ANNEXURE 13 (c).
Statement showing Divisionwise Lapses of Grant on District Board Roads.

Serial number and name of division. (1)	Original works.			Maintenance works.			
	Final allotment. (2) RS.	Expenditure. (3) RS.	Lapse. (4) RS.	Final allotment. (5) RS.	Minimum allotment required for proper maintenance of roads. (6)	Expenditure. (7) RS.	Lapse. (8) RS.
<i>Tiruchirappalli Circle.</i>							
1 Chingleput ..	..	86,300	3,30,117	..	4,17,980	4,23,089	..
2 South Arcot ..	..	4,33,100	3,20,830	1,12,270	7,39,830	7,83,602	..
3 Nagapattinam ..	..	2,72,350	2,64,695	7,655	2,76,250	1,85,244	91,006
4 Tanjore ..	..	4,34,220	2,79,095	1,55,125	7,28,000	3,82,913	3,45,087
5 Tiruchirappalli ..	..	1,47,200	1,40,744	6,456	9,75,000	7,41,493	2,33,507
6 Madurai ..	..	3,26,000	4,78,504	..	9,00,000	8,16,389	83,611
7 Ramanathapuram ..	..	5,38,500	5,33,066	5,434	7,00,000	6,95,939	4,061
Tirunelveli ..	..	7,97,100	9,76,583	..	8,25,900	10,25,568	..
9 Coleroon Bridge ..	..	..	..	..	..	..	..
10 Transport and Machinery Division ..	..	..	..	..	Do.	..	..
11 Designs Division ..	..	..	..	..	Do.	..	..
Total ..	30,35,170	33,23,634	..	55,62,960	..	50,54,237	5,08,723
<i>Coimbatore Circle.</i>							
12 North Arcot ..	..	1,41,200	1,64,976	..	3,50,000	3,37,412	12,588
13 Salem ..	..	2,42,173	2,39,780	11,393	4,46,700	3,96,488	50,212
14 Krishnagiri ..	..	7,87,200	1,10,075	6,77,125	4,30,000	4,51,129	..
15 Erode ..	..	1,21,600	34,532	87,068	10,04,400	7,17,053	2,87,347
16 Coimbatore ..	..	4,45,250	1,30,947	3,14,303	7,51,350	5,72,497	1,78,853
17 Ootacamund ..	..	1,74,348	98,520	75,828	1,00,000	95,482	4,518
18 Palghat ..	..	3,44,500	43,701	3,00,799	2,80,000	1,94,726	85,274
19 Kozhikode ..	..	1,21,200	54,670	66,530	4,29,700	3,09,422	1,20,278
20 Mangalore ..	..	1,98,000	91,367	1,06,633	2,50,000	2,14,741	35,259
Total ..	25,75,471	9,59,568	16,15,903	40,42,150	..	32,88,950	7,53,200
Grand total ..	56,10,641	42,83,202	13,27,439	96,05,110	..	83,43,187	12,61,923

ANNEXURE 14.

Financial Statement of all Disbursements.

Serial number and name of division.	(1)	Total works expenditure—Government and District Board.		Tools and Plant—Expenditure (New Supplies and Repairs).		Pay of establishment.			Percentage of establishments charges to works expenditure including Tools and Plant.			Contingencies.											
		(2)	RS.	(3)	RS.	(4)	RS.	(5)	RS.	(6)	RS.	(7)	RS.	(8)	RS.	(9)	RS.	(10)	RS.	(11)	RS.	Total.	
																							Engineering.	Ministerial.	Travelling allowance.	Rents.	Other items.
Tiruchirappalli Circle.																							
1 Chingleput	..	..	44,62,416	1,35,061	95,545	42,380	74,208	4.61	4,379	16,540	..	48,30,529											
2 South Arcot	..	..	30,76,354	1,40,270	93,778	70,320	32,389	6.10	6,032	18,974	..	34,38,117											
3 Nagapattinam	..	..	16,87,168	72,544	40,479	33,697	49,043	7.00	3,378	11,219	..	18,97,528											
4 Tanjore	..	..	23,03,584	92,553	42,510	34,415	47,062	5.17	6,492	7,716	..	25,34,332											
5 Tiruchirappalli	..	..	35,17,526	1,75,303	73,594	42,038	68,017	4.97	4,637	11,962	..	38,93,077											
6 Madurai	..	..	42,08,739	2,46,463	73,676	75,526	33,864	4.11	23,480	15,555	..	46,77,303											
7 Ramanathapuram	..	..	40,30,257	1,69,291	73,616	48,292	61,060	4.35	6,445	14,616	..	44,03,577											
8 Tirunelveli	..	..	37,05,814	1,46,640	62,935	34,329	58,736	4.02	4,893	13,980	..	40,26,427											
9 Coleroon Bridge Division	..	..	1,53,429	144	7,110	14,470	9,310	20.11	660	1,373	..	1,86,496											
10 Transport and Machinery Division	..	..	2,373	9,77,343	49,951	21,597	4,084	..	704	8,844	..	10,64,896											
11 Designs Division	..	..	..	..	18,406	13,407	891	..	859	921	..	34,484											
12 Circle Office	..	..	..	..	15,403	28,302	19,850	..	..	5,089	..	68,644											
Total	..	..	2,71,47,660	21,55,612	6,46,103	4,58,773	4,58,514	5.33	61,959	1,26,789	..	3,10,55,410											
Coimbatore Circle.																							
13 North Arcot	..	..	24,77,661	1,038	64,558	36,174	17,789	4.78	4,793	13,953	..	26,15,966											
14 Salem	..	..	20,39,825	1,00,370	48,324	27,660	20,989	4.53	3,378	11,512	..	22,52,058											
15 Krishnagiri	..	..	17,04,583	1,12,052	40,891	27,054	44,137	6.16	3,624	9,210	..	19,41,551											
16 Erode	..	..	22,10,307	1,24,643	68,595	55,530	27,014	6.47	5,056	13,445	..	25,04,590											
17 Coimbatore	..	..	22,21,738	1,48,576	76,739	35,626	16,353	5.43	4,071	6,001	..	25,09,104											
18 Ootacamund	..	..	5,19,121	45,607	28,032	13,038	1,417	7.52	2,397	..	..	6,09,612											
19 Palghat	..	..	21,35,506	1,43,559	32,088	30,593	20,712	3.65	4,512	7,735	..	23,74,705											
20 Kozhikode	..	..	20,33,181	97,204	53,477	29,129	26,006	5.03	3,767	11,609	..	22,54,373											
21 Mangalore	..	..	35,66,182	1,53,865	52,242	36,486	54,457	3.84	5,034	15,329	..	38,83,595											
22 Circle Office	..	..	..	..	18,912	41,409	7,602	..	..	2,756	..	70,679											
Total	..	..	1,89,08,104	9,26,914	4,83,858	3,32,699	2,36,476	5.30	36,632	91,550	..	2,10,16,233											
23 Chief Engineer's Office	..	..	..	..	97,539	2,01,482	12,436	..	..	23,852	..	3,35,309											
Grand total	..	..	4,60,55,764	30,82,526	12,27,500	9,92,954	7,07,426	5.95	98,591	2,42,191	84	5,24,06,952											

ANNEXURE 15.

Statement showing the works approved by Government under Post-War Road Development programme during and to end of the year 1953-54.

Serial number and name of division or circle.				Government roads.				District Board roads.			
				During the year.		To end of the year.		During the year.		To end of the year.	
(1)	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.			
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)			
	RS.		RS.		RS.		RS.				
Tiruchirappalli Circle											
1 Chingleput	1	1,58,900	31	56,32,400	..	..	41	7,43,450			
2 South Arcot	1	85,000	50	22,12,201	3	1,09,900	119	23,89,660			
3 Nagapattinam. .. .	..	..	} 20	40,81,182	..	..	92	19,73,170			
4 Tanjore	..	..									
5 Tiruchirappalli .. .	1	28,500	60	11,61,485	..	..	198	16,54,400			
6 Madurai	..	..	81	20,21,900	..	..	114	17,38,940			
7 Ramanathapuram .. .	2	2,83,100	88	26,14,300	..	..	106	21,11,750			
8 Tirunelveli	..	..	19	11,06,200	..	..	58	21,19,000			
9 Coleroon Bridge Division ..	..	..	5	35,45,750	..	..	..	..			
10 Transport and Machinery Division.	..	..	..	..	..	..	..	..			
Total ..	5	5,55,500	354	2,23,75,418	3	1,09,900	723	1,27,30,370			
Coimbatore Circle											
1 North Arcot	..	..	34	41,57,875	..	..	135	15,70,430			
2 Krishnagiri	..	..	} 53	66,62,510	..	..	131	15,21,170			
3 Salem	1	2,20,700									
4 Erode	..	..	} 82	28,47,315	3	27,700	204	22,05,625			
5 Coimbatore	2	29,700									
6 Ootacamund	..	..	13	27,29,060	1	21,000	24	4,10,050			
7 Palghat	..	..	} 37	18,25,720	2	1,94,800	69	13,20,571			
8 Kozhikode	..	..									
9 Mangalore	..	..	68	54,91,255	2	22,000	46	5,61,670			
Total ..	3	2,50,400	287	2,37,13,735	29	4,38,800	409	80,89,516			
Grand Total ..	8	8,05,900	641	4,60,89,153	32	5,48,700	1,337	2,08,19,886			

ANNEXURE 16.
(i) Statement showing the technical sanctions accorded to estimates during 1953-54.

Serial number and name of circle or division.	Original works.			Repairs.			Tools and plant New Supplies and Repairs.			Avenues.		
	Number of works for which establishments were sanctioned.			Number.			Number.			Number.		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Total	
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	number.	cost.
1 Chingleput	3	49,000	232	25,44,320	96	3,38,593	36	72,770	367	30,04,683	2,499	2,43,25,005
2 South Arcot	2	9,80,000	140	18,01,895	57	2,00,435	48	60,900	247	30,43,230	410	27,45,408
3 Nagapattinam	3	2,980	100	17,54,930	30	1,57,918	29	19,175	176	19,35,003	238	20,19,082
4 Tanjore	..	..	204	20,43,880	37	2,87,400	6	4,150	247	23,85,430	233	20,69,068
5 Tiruchirappalli	8	1,92,300	217	25,50,100	37	2,14,580	67	71,230	329	30,28,160	252	29,46,325
6 Madurai	..	..	326	38,67,445	58	3,91,923	4	1,860	388	42,61,233	253	17,71,331
7 Ramanathapuram	13	82,110	186	21,25,124	76	3,62,603	18	24,560	273	25,91,957	204	26,87,455
8 Tirunelveli	13	16,740	197	29,51,600	47	1,85,400	25	7,580	287	31,61,320	191	16,74,094
9 Coleroon Bridge Division ..	..	..	2	310	8	2,700	..	..	10	3,010	131	33,74,051
10 Transport and Machinery Division.	..	..	..	..	170	6,39,379	..	..	170	6,39,376	71	5,25,313
11 Circle office	5	3,22,600	..	..	..	..	..	..	5	3,22,600	19	7,18,070
Total ..	57	16,45,730	1,584	1,96,39,604	625	27,30,646	233	2,62,025	2,499	2,43,25,005	2,002	2,05,30,397
12 North Arcot	2	4,110	321	25,21,450	73	1,94,298	14	25,550	410	27,45,408	4,501	4,48,58,402
13 Salem	18	5,63,500	182	12,18,518	29	1,39,450	59	97,614	238	20,19,082	..	..
14 Krishnagiri	..	..	153	18,42,042	64	2,03,866	16	23,160	233	20,69,068	..	..
15 Erode	4	28,850	137	24,77,360	81	3,29,615	30	1,10,700	252	29,46,325	..	..
16 Coimbatore	..	..	167	15,41,431	71	2,21,480	15	8,470	253	17,71,331	..	..
17 Palghat	21	50,360	142	24,73,330	37	1,61,495	4	2,270	204	26,87,455	..	..
18 Kozhikode	1	17,600	131	14,01,060	57	2,52,904	2	2,530	191	16,74,094	..	..
19 Mangalore	..	..	108	26,70,681	19	6,92,450	4	1,920	131	33,74,051	..	..
20 Ootacamund	..	..	53	4,43,763	18	81,550	..	..	71	5,25,313	..	..
21 Circle office	12	6,99,500	..	..	7	18,970	..	..	19	7,18,070	..	..
Total ..	58	13,63,920	1,314	1,65,98,635	456	22,65,628	144	2,72,214	2,002	2,05,30,397	..	..
Grand total ..	115	30,09,650	2,928	3,62,38,239	1,081	50,76,276	377	5,34,239	4,501	4,48,58,402	..	..

ANNEXURE 16—cont.

(ii) Statement showing the technical sanctions accorded to estimates for District Board works during 1953-54.

Serial number and name of circle or division.	Original works.		Repairs.		Tools and plant new supplies and repairs.		Avenues.		Non-Road Works.		Total.	
	Number of works for which estimates were sanctioned.		Number.		Number.		Number.		Number.		Number.	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		RS.		RS.		RS.		RS.		RS.		RS.
1 Chingleput	6	49,150	361	7,48,355	..	..	3	4,500	37	4,77,880	407	12,70,885
2 South Arcot	2	7,64,000	457	12,92,185	..	..	44	35,100	259	5,70,768	762	20,62,111
3 Nagapattinam	77	7,35,290	638	8,21,450	2	13,000	26	11,520	76	67,505	819	16,48,765
4 Tanjore	11	2,54,740	565	19,65,350	..	..	4	2,570	27	1,66,920	607	23,89,580
5 Tiruchirappalli	..	..	366	16,36,266	..	..	65	42,240	118	2,87,867	549	19,65,873
6 Madurai	14	5,13,000	351	9,53,530	..	..	..	..	..	..	365	14,06,630
7 Ramanathapuram	27	5,64,400	103	9,81,114	11	8,300	21	22,870	110	55,976	362	16,32,660
8 Tirunelveli	53	4,07,500	165	12,75,450	1	7,000	15	4,800	..	..	269	10,94,750
9 Coleroon Bridge Division	..	..	..	..	..	..	..	..	..	..	..	..
10 Transport and Machinery Division	..	..	..	..	..	..	..	..	..	..	..	..
11 Circle office	..	..	..	..	..	..	..	..	..	..	..	..
Total	204	38,01,880	3,126	96,73,800	14	28,300	178	1,23,660	631	1,46,261	4,153	1,54,73,904
12 North Arcot	36	2,60,390	535	6,63,186	..	..	15	11,380	253	3,18,840	839	12,53,796
13 Salem	9	24,800	327	6,48,415	..	..	17	25,630	..	..	353	6,05,845
14 Krishnagiri	..	..	256	7,12,075	1	10,000	5	3,100	74	65,725	336	7,91,900
15 Erode	39	3,51,040	193	3,18,680	..	..	6	7,720	..	..	244	6,77,440
16 Coimbatore	10	1,01,586	492	11,63,081	1	33	9	2,500	25	60,740	537	13,27,940
17 Palghat	6	4,62,400	112	3,18,200	..	..	4	2,920	68	3,00,365	190	10,92,875
18 Kozhikode	2	40,700	209	4,60,732	..	..	3	3,060	..	..	214	5,04,492
19 Mangalore	..	..	26	1,02,887	..	..	..	..	8	64,950	34	1,67,537
20 Ootacamund	5	29,300	96	2,00,102	..	..	..	..	42	6,861	143	2,36,263
21 Circle office	9	5,99,970	2	45,500	..	..	..	..	..	..	11	6,45,300
Total	116	18,70,016	2,254	46,32,853	2	10,033	459	53,310	470	8,26,171	2,901	73,92,388
Gand Total	340	56,71,893	5,380	1,43,06,658	16	38,333	237	1,76,970	1,101	29,72,435	7,054	2,28,66,292

ANNEXURE 16—cont.

(iii) Statement showing the technical sanctions accorded to estimates for Municipal and Panchayat Works by the Divisional Engineers (Highways) and Superintending Engineers (Highways) during the year 1953-54.

Serial number and name of division.	Municipal works.		Panchayat works.	
	Total number.	Total cost.	Total number.	Total cost.
		RS.		RS.
<i>Tiruchirappalli Circle.</i>				
1 Chingleput	..	..	..	..
2 South Arcot	9	63,233	..	..
3 Nagapattinam	4	27,040	1	5,550
4 Tanjore	..	..	..	..
5 Tiruchirappalli	1	3,250	16	37,875
6 Madurai	..	..	..	..
7 Ramanathapuram	1	22,500	..	..
8 Tirunelveli	1	6,600	..	..
9 Coleroon Bridge division	..	..	..	..
10 Transport and Machinery and division	..	..	..	..
11 Circle office	11	4,81,800	2	74,700
Total	27	6,04,423	19	1,18,125
<i>Coimbatore Circle.</i>				
1 North Arcot	21	1,35,467	6	33,550
2 Salem	..	..	17	58,180
3 Erode	9	45,125	17	50,050
4 Coimbatore	3	21,220	32	87,340
5 Palghat	..	..	3	21,200
6 Kozhikode	9	56,300	2	13,900
7 Mangalore	..	..	8	64,650
8 Ootacamund	..	..	3	21,200
9 Circle office	3	75,700	1	13,000
10 Krishnagiri	..	..	15	96,615
Total	45	3,33,812	104	4,59,885
Grand total	72	9,38,235	123	5,77,810

ANNEXURE 17.

Statement showing the number of tender cases approved by the Superintending Engineers and Divisional Engineers (Highways).

Serial number and name of division.	Government works.			District board works.			Municipal works.			Total.
	Number approved by Divisional Engineer (Highways).	Number approved by Superintending Engineer (Highways).	Number sent up to Chief Engineer (Highways).	Number approved by Divisional Engineer (Highways).	Number approved by Superintending Engineer (Highways).	Number sent up to Chief Engineer (Highways).	Number approved by Divisional Engineer (Highways).	Number approved by Superintending Engineer (Highways).		
Tiruchirappalli Circle.										
1 Chingleput	100	1	..	84	3	..	..	..	188	
2 South Arcot,	82	2	..	205	5	..	..	..	303	
3 Nagapattinam	74	3	..	246	..	..	..	..	323	
4 Tanjore	73	4	..	102	..	..	..	..	180	
5 Tiruchirappalli	207	36	..	386	3	..	..	..	632	
6 Madurai	156	9	..	202	2	..	..	..	369	
7 Ramanathapuram	80	9	..	141	6	..	..	..	286	
8 Tirunelveli	106	4	..	334	2	..	..	..	2	
9 Coleroon Bridges division.	2	..	..	..	..	..	..	..	..	
10 Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	
Total ..	885	68	..	1,700	21	..	11	..	2,685	
Coimbatore Circle.										
11 Krishnagiri	63	45	..	101	..	..	..	..	209	
12 Salem,	108	3	..	149	6	..	..	..	286	
13 Coimbatore,	114	..	..	246	..	..	..	..	360	
14 Erode	96	17	..	169	4	..	..	..	286	
15 Mangalore	107	21	3	2	24	..	..	..	157	
16 Ootacamund	31	1	..	47	..	..	..	..	79	
17 Palghat	115	7	..	128	3	..	..	..	253	
18 Kozhikode	62	8	1	107	1	..	..	..	179	
19 Vellore	235	..	..	88	..	..	..	..	323	
Total ..	931	102	4	1,037	38	..	..	..	2,112	
Grand Total ..	1,816	170	4	2,737	69	..	11	..	4,797	

ANNEXURE 18.

(i) Statement showing the number of agreements accepted by the Superintending Engineers and Divisional Engineers for Government Works.

Serial number and name of division.	Accepted by Divisional Engineer.		Accepted by Superintending Engineer.		Total.	
	Number.	Amount. RS.	Number.	Amount. RS.	Number.	Amount. RS.
<i>Tiruchirappalli Circle.</i>						
1 Chingleput	272	15,78,842	..	..	272	15,78,842
2 South Arcot	177	9,00,511	..	..	177	9,00,511
3 Nagapattinam	74	9,00,806	..	..	74	9,00,806
4 Tanjore	155	8,10,892	..	..	155	8,10,892
5 Tiruchirappalli	419	22,58,087	..	..	419	22,58,087
6 Madurai	152	12,11,677	..	..	152	12,11,677
7 Ramanathapuram	143	1,08,638	..	..	143	1,08,638
8 Tirunelveli	391	20,75,654	..	..	391	20,75,654
9 Coleroon Bridge Division	16	73,849	..	..	16	73,849
10 Transport and Machinery Division.	4	..	..	..	4	..
Total ..	1,803	90,22,952	21	23,66,598	1,824	1,22,89,550
<i>Coimbatore Circle.</i>						
11 Krishnagiri	140	5,25,586	..	..	140	5,25,586
12 Salem	203	7,37,615	..	..	203	7,37,615
13 Coimbatore	172	8,77,889	..	..	172	8,77,889
14 Erode	324	14,86,904	..	..	324	14,86,904
15 Mangalore	300	21,67,349	12	6,60,761	312	28,28,110
16 Ootacamund	90	2,05,590	..	..	90	2,05,590
17 Palghat	110	12,74,635	6	1,63,340	116	14,37,975
18 Kozhikode	109	6,96,289	12	91,228	121	7,87,517
19 Vellore	201	12,04,749	1	1,87,527	202	13,92,276
Total ..	1,649	91,76,066	37	12,77,887	1,686	1,04,53,953

* K 2 Piece work agreement.

ANNEXURE 18—cont.

(ii) Statement showing the number of agreements accepted by the Superintending Engineers and Divisional Engineers for District Board Works.

Serial number and name of division.	Accepted by Divisional Engineer.		Accepted by Superintending Engineer.		Total.	
	Number.	Amount. RS.	Number.	Amount. RS.	Number.	Amount. RS.
<i>Tiruchirappalli Circle.</i>						
20 Chingleput	127	7,31,892	..	..	127	7,31,892
21 South Arcot,	375	12,51,124	..	..	375	12,51,124
22 Nagapattinam	246	3,96,768	..	..	246	3,96,768
23 Tanjore	102	6,10,058	..	..	102	6,10,058
24 Tiruchirappalli	412	11,72,123	..	..	412	11,72,123
25 Madurai	270	18,11,389	..	..	270	18,11,389
26 Ramanathapuram	189	5,63,683	..	..	189	5,63,683
27 Tirunelveli	317	13,21,075	..	..	317	13,21,075
28 Coleroon Bridge Division	..	..	..	..	..	..
Total ..	2,038	78,93,117	..	..	2,038	78,93,117
<i>Coimbatore Circle.</i>						
29 Krishnagiri	179	3,40,039	..	..	179	3,40,039
30 Salem	156	4,59,936	..	..	156	4,59,936
31 Coimbatore	263	8,80,545	..	..	263	8,80,545
32 Erode	465	11,27,336	..	..	465	11,27,336
33 Man3alore	170	3,39,983	..	..	170	3,39,983
34 Ootacamund	80	1,88,703	..	..	80	1,88,703
35 Palghat	181	4,43,628	..	..	181	4,43,628
36 Kozhikode	129	3,28,517	..	..	129	3,28,517
37 Vellore	165	1,60,615	..	..	165	1,60,615
Total ..	1,788	42,68,452	..	..	1,788	42,68,452
Grand total ..	3,826	1,21,61,569	..	..	3,826	1,21,61,569

ANNEXURE 19.

Work done in the office of the Chief Engineer (Highways).

1. Tenders—

A. Government Roads—

	Number.	Cost, RS.
1. Total cost of works for which tender proposals were approved by the Chief Engineer (Highways).	46	15,65,315
2. Total cost of works for which tender proposals were recommended to Government and approved by them.	6	3,19,560

B. District Board Roads—

1. Total cost of works for which tender proposals were approved by the Chief Engineer (Highways).	1	1,10,000
2. Total cost of works for which tender proposals were recommended to Government and approved by them.	25	3,23,761

2. Estimates.—Ninty-five estimates to a total cost of Rs. 3,04,56,778 were dealt with during the year 1953-54 against 139 estimates totalling to Rs. 463.60 lakhs in 1952-53, composite State.

	Number of works.	Amount. RS.
1 Road works	26	96,40,600
2 Bridges and culverts	52	1,89,41,850
3 Other works	2	29,300
4 Tools and plant	15	18,45,028
Total ..	95	3,04,56,778

ANNEXURE 19—cont.

Work done in the office of the Chief Engineer (Highways)—cont.

The details of estimates are given below:—

Serial number and date.	Description of work.	Estimated cost. RS.
<i>Road works.</i>		
1 April 1953	Providing asphaltic concrete surface and other improvements to Kancheepuram-Chingleput road in miles 40/7 + 122 yds. to 42/2 + 125 yds. within Kancheepuram Municipal limits.	1,87,000
2 Do.	Cement concreting Pollachi-Meenakarai road mile 0/2 to 1/4 + 140.	1,08,000
3 Do.	Cement concreting Periyakulam-Kuruvanuthu road mile 9/0 to 11/0.	62,200
4 Do.	Metalling Vridhachalam-Salem road miles 51/0 to 73/0	1,90,000
5 Do.	Revised estimate for cement concreting Cuddalore-Chittoor road miles 1/6 to 10/0.	8,37,000
6 Do.	Providing asphaltic concrete in miles 0/0 to 2/1 of Mangalore-Baindur road.	1,57,000
7 Do.	Providing dustless surfacing in miles 2/1 to 3/4 of Mangalore-Baindur road.	60,000
8 May 1953	Forming Chapprapadavu Thadikadavu-Naduvil road	1,13,000
9 Do.	Providing dustless surfacing at mile 26/3 to 27/3 of Manamadurai-Sivaganga-Tirupathur road.	17,000
10 Do.	Cement concreting Salem-Cuddalore road miles 2/6 to 5/2	2,97,200
11 July 1953	Formation of Kolli hills road	24,00,000
12 Do.	Widening narrow portions in miles 4/0 to 8/0 of Chidambaram-Mannargudi road.	10,000
13 August 1953	Surfacedressing with precoated chips to street No. 43 from Tiruvallur Bungalow to junction of 1st Fort (via) Municipal Office.	45,000
14 Do.	Forming a diversion road at miles 1/1 of Mercanam-Tindivanam road.	6,600
15 January 1954	Revised Estimate for the work of cement concreting Colmbatore-Mettupalayam road miles 0/0 to 22/0.	21,00,000
16 Do.	Forming and metalling Thandigudi ghat road miles 0/0 to 19/0.	2,64,000
17 Do.	Widening the road from Tanjore to Nagapattinam mile 19/8 to 24/0.	35,000
18 March 1954	Estimate for the work of providing blacktop surfacing in mile 231/1 + 500 to 236/5 of Salem-Cochin road.	2,20,700
19 Do.	Estimate for widening and blacktopping the National Highway in miles 29/0 to 33/0 in Chingleput Division.	1,58,900
20 Do.	Revised estimate for the work of improving Mangalore Agumbe road miles 58/4 to 61/4.	1,12,000
21 Do.	Cement concreting mile 21/2 to 26/0 of Tanjore-Trichirappalli road.	3,05,000
22 Do.	Widening and improving Erukanjeri road section of G.S.T. road from the sub-way down Basin bridge upto city limits.	2,10,000
23 Do.	Estimate for the work forming diversion in mile 0/1 of Merkanam-Tindivanam road.	2,75,000
24 Do.	Formation of Ramanathapuram Mandapam road	4,70,000
25 Do.	Forming a road from Mannarghat to Chinnathadagam	10,00,000
		<u>96,40,800</u>

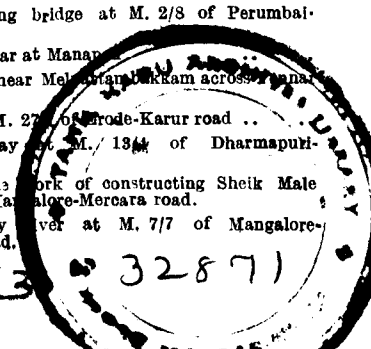
Bridges and Causeways.

1 April 1953	Reconstructing the damaged bridge at mile 15/2 of Cuddalore-Vridhachalam road.	3,30,000
2 Do.	Reconstructing the bridge at miles 0/1-5 of Malpe Udipi Karkal road.	1,80,000
3 May 1953	Revised estimate for the work of reconstructing the bridge at miles 73/1 of Calicut-Mysore Frontier road.	1,65,000
4 Do.	Revised estimate for reconstructing the bridge at miles 49/8 of Calicut-Mysore Frontier road.	1,25,000
5 Do.	Revised estimate for the work of reconstructing the bridge at miles 52/2 of Calicut-Mysore Frontier road.	1,40,000
6 Do.	Revised estimate for the work of reconstructing the bridge at miles 55/6 Calicut-Mysore Frontier road.	1,15,000
7 Do.	Revised estimate for reconstructing the bridge at miles 69/1 of Calicut-Mysore Frontier road.	1,50,000
8 Do.	Reconstructing a culvert at miles 16/2 of Kollengode-Meenakarai road.	30,000
9 Do.	Revised estimate for the work of constructing bridges at miles 35/6 and 36/3-6 of Palamcottah-Nagalapuram road.	2,00,000

ANNEXURE 19—cont.

Work done in the office of the Chief Engineer (Highways)—cont.

Serial number and date.	Description of work.	Estimate cost. RS.
<i>Bridges and Causeways.</i>		
10 May 1953	Constructing a culvert at M. 4/1 of Kannamangalam-Arani road.	10,000
11 Do.	Constructing a bridge across Kuppam river M. 6/6-8 of Payyanur-Taliparamba road.	7,70,000
12 Do.	Constructing a bridge across Coovum river at miles 27/5 of Tirumuzhi-Satyaavedu road.	2,60,000
13 Do.	Bridge across Kavay river at M. 7/6 of Vellore-Karivellore road.	70,000
14 Do.	Bridge across Puchmugar river at miles 5/5 of Mudabiar-Buntwal road section of Bombay Cape Comorin road.	1,50,000
15 Do.	Redecking the section at M. 15/3 of Thirumallapuram road.	88,000
16 Do.	Constructing a bridge at M. 10/2 of Manantoddy Panamaram road across Panamaram river.	4,50,000
17 Do.	Strengthening the bridge at M. 47/6 of Calicut-Nilambur Gudalur road.	17,000
18 Do.	Constructing a bridge across Coleroon at Anaikaran Chatram	26,00,000
19 Do.	Remodelling the bridge at miles 8/6 of Chidambaram-Mannargudi road.	30,000
20 Do.	Strengthening the Kootilangady bridge at miles 411/5 of Madras-Calicut road.	47,000
21 Do.	Revised Estimate for the work of constructing bed level causeway at M. 15/1 of Mercanam-Pondy road.	36,000
22 Do.	Bridge across Kodamurutty river on Ayyampet-Ganapathy Agraharam road.	5,85,000
23 July 1953	Revised Estimate for constructing a bridge at M. 38/8 of Madras Tiruvallur-Tirutani road.	37,000
24 Do.	Bridge across Payaswami river on Kalladka-Kanhangad road.	10,00,000
25 Do.	Revised Estimate for the bridge at M. 4/8 of Nanguneri-Thirukannangudy road.	83,000
26 Do.	Bridge at M. 0/3 of Tiruvattur-Ponneri-Panjatti road.	2,50,000
27 August 1953	Revised Estimate for constructing a bridge across Bharathapuzha river at M. 18/2 of Angadipuram-Kuttipuram-Cochin road.	21,00,000
28 Do.	Constructing a bridge at M. 19/3 of Madras-Bangalore road.	1,15,000
29 Do.	Constructing a bridge at M. 49/2-3 of the Mangalore-Agumbe road section of Bombay-Cape Comorin road.	1,32,000
30 Do.	Constructing a bridge at M. 150/4 of the road from South Arcot District Frontier to Tanjore (via) Lower Adicut.	1,24,000
31 Do.	Reconstructing the bridge at M. 66/6 of Madurai-Ramanathapuram road.	2,66,900
32 Do.	Revised Estimate for the bridge at M. 4/8 of Kozhikode-Balusseri road.	1,10,000
33 Do.	Bridge across Kariangode river at M. 52/8 and across Nileshwar river at M. 50/1 of Kanhangad-Chervuvathur road section of Bombay-Cape Comorin road.	9,30,000
34 September 1953	Bridge across Perumbuzha river in M. 75/3 of Taliparamba-Payyanur section of Bombay-Cape Comorin road.	5,70,000
35 Do.	Bridge over Swarnanadhi at M. 13/1 of Malpe-Udipi-Hebri road.	4,00,000
36 Do.	Estimate for constructing the bridge across Buckingham Canal including formation of approach roads between Kelambakkam and Covelong.	1,75,700
37 Do.	Reconstructing the bridge at M. 6/5 of Ulleri-Perambara road.	3,00,000
38 Do.	Constructing a bridge over Srikanthapuram in M. 19/8 of Taliparamba-Iruttu road.	4,90,000
39 Do.	Estimate for constructing bridge at M. 2/8 of Perumbai-Padiocchal road.	1,75,000
40 Do.	Bridge across Karumaniyar at Manapada	2,20,000
41 October 1953	Constructing a causeway near Melambakkam across Ponnai river.	5,50,000
42 Do.	Bridge across Noyyal at M. 27/6 of Kollengode-Karur road	2,70,000
43 Do.	Constructing a causeway at M. 13/4 of Dharmapuri-Tirupattur road.	80,000
44 Do.	Revised Estimate for the work of constructing Sheik Male bridge at M. 38/1 of Mangalore-Mercara road.	67,000
45 Do.	Bridge over Tallapady river at M. 7/7 of Mangalore-Chervuvathur Coast road.	2,00,000

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ANNEXURE 19—*cont.*Work done in the office of the Chief Engineer (Highways)—*cont.*

Serial number and date.	Description of work.	Estimated cost. RS.
<i>Bridges and causeways.</i>		
46 October 1953 ..	Working Estimate for cross drainage works in the estimate for the work of improvements to Madras-Mahabalipuram road.	48,250
47 Do. ..	Constructing a causeway across Sarabanganadhi at M. 8/5 of Kumarapalayam-Edapadi road.	25,000
48 Do. ..	Bed level causeway across Malatar at M. 2/2 of Sirugramam-Anathur road.	35,000
49 March 1954 ..	Constructing a bridge across Kaduvayyar in Vadakkupayur village limits.	2,75,000
50 Do. ..	Constructing a bridge over Paar river at M. 38/3-5 of Madras Dindigul road.	25,00,000
51 Do. ..	Reconstructing the Belthangadi bridge at M. 37/3 of Mangalore-Mysore road.	2,85,000
52 Do. ..	Constructing a bridge across river Tambaraparni near Mukkani on Tiruchendur-Tuticorin road.	7,70,000
Total ..		1,89,41,850

Other works.

1 May 1953 ..	Estimate for field scale experiments of 3½ inches wide tyred bullock cart wheels.	27,000
2 March 1954 ..	Estimate for conducting experiments in the Soil Research Laboratory for the year 1953-54 at Guindy.	2,300
Total ..		29,300

Tools and Plant.

1 April 1953 ..	Estimate for the purchase of one tractor tanker	10,200
2 May 1953 ..	Estimate for the supply of one "Wager" impact roller.	4,000
3 Do. ..	Estimate for the supply of one "Mighty Midget" Pavement breaker.	16,000
4 Do. ..	Estimate for purchase of 16 Concrete mixers, 23 vibrators, 16 units of road forms and 16 testing units.	2,75,000
5 June 1953 ..	Estimate for the purchase of one milling machine	27,000
6 August 1953 ..	Estimate for the purchase of danger lanterns 1,000 numbers.	27,500
7 Do. ..	Estimate for tools and plant other than road rollers taken over to the Highways Department from Kurnool District Board.	29,368
8 Do. ..	Estimate for the purchase of pressure piling sets	87,000
9 Do. ..	Subestimate for fabrication of trusses in Calander Hamilton bridge.	52,100
10 Do. ..	Purchase of 74 number of bitumen boilers 1,000 numbers of hand drawn mixers and one number hot mix plant.	8,00,000
11 Do. ..	Purchase of boilers and mixers	3,85,000
12 Do. ..	Purchase of Sommer field track from disposals	19,300
13 Do. ..	Purchase of cylinder bore and line reborling machine	26,300
14 December 1953 ..	Purchase of one S.R. 4 strain measuring apparatus	12,000
15 March 1954 ..	Estimate for the purchase of Naval Hanger No. 5 at Chrompet Military Stores.	72,960
Total ..		18,45,028

ANNEXURE 20.

(i) Statement showing the contracts awarded since 1946-47.

Year.	Government roads.					
	Maintenance.		Surfacings.		Bridges, culverts and causeways.	
	Number.	Cost.	Number.	Cost.	Number.	Cost.
	(2)	(3)	(4)	(5)	(6)	(7)
	RS.			RS.		RS.
1946-47 ..	2,087	1,03,91,377	36	6,16,240	80	1,86,825
1947-48 ..	3,516	1,85,83,686	72	6,07,192	324	6,33,520
1948-49 ..	3,569	2,37,90,402	90	20,94,744	163	30,19,713
1949-50 ..	3,631	2,96,01,947	169	66,75,229	372	28,11,250
1950-51 ..	3,888	3,18,93,090	405	79,42,106	514	52,12,011
1951-52 ..	3,787	4,10,25,074	487	63,01,105	368	51,99,521
1952-53 ..	3,399	3,21,17,336	690	95,30,243	368	33,36,209
1953-54 ..	1,944	1,82,44,849	246	18,86,254	86	27,56,742

Year.	District board roads.						Total.	
	Maintenance.		Surfacings.		Bridges, culverts and causeways.		Num-ber.	Cost.
	Num-ber.	Cost.	Num-ber.	Cost.	Num-ber.	Cost.	(14)	(15)
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	RS.			RS.		RS.		RS.
1946-47 ..	3,908	63,57,633	29	3,23,805	131	2,52,845	6,271	1,81,28,725
1947-48 ..	4,611	83,95,396	114	12,06,933	274	5,64,000	8,911	2,99,90,727
1948-49 ..	4,945	1,10,18,993	89	12,38,877	403	9,21,674	9,259	4,20,84,609
1949-50 ..	5,067	1,34,98,933	220	34,55,378	269	22,59,252	9,723	5,83,01,989
1950-51 ..	5,333	1,49,00,947	237	34,43,615	332	35,01,012	10,714	6,68,92,781
1951-52 ..	5,767	1,65,97,371	481	38,25,215	392	34,98,002	11,280	6,64,56,288
1952-53 ..	4,613	1,60,38,968	380	22,19,258	359	29,04,209	9,809	6,61,46,133
1953-54 ..	2,677	94,37,537	57	6,99,943	193	22,22,279	5,203	3,52,47,604

HIGHWAYS DEPARTMENT, 1953-54

(i) *Statement showing the number of investigations since 1946-47.*

Year.				Number of investigations.		
				Government.	District board.	Total.
1946-47	..	..	..	61	60	121
1947-48	..	..	..	179	489	668
1948-49	..	..	..	262	288	550
1949-50	..	..	..	263	399	662
1950-51	..	..	..	116	428	544
1951-52	..	..	..	91	506	597
1952-53	..	..	..	93	212	305
1953-54	..	..	..	30	46	76
Total	..	..	..	1,095	2,428	3,523

NOTE.— (1) Division-wise particulars for the year 1953-54 are given in Statement (ii).
(2) The particulars for the year 1953-54 are in respect of Madras Residuary State only.

(ii) *Statement showing the number of investigation in 1953-54.*

Serial number and name of division.							Number of investigations.		
							Government.	District boards.	Total.
<i>Tiruchirappalli Circle.</i>									
1	Chingleput	..	..	..	..	..	..	..	
2	South Arcot	..	..	..	..	2	1	3	
3	Nagapattinam	..	..	..	..	..	5	5	
4	Tanjore,	..	..	..	..	..	..	..	
5	Tiruchirappalli	..	..	..	..	..	..	..	
6	Madurai	..	..	..	..	..	..	..	
7	Ramanathapuram	..	..	..	..	..	8	8	
8	Tirunelveli	..	..	..	..	4	13	17	
9	Coleroon Bridge Division	..	..	..	..	..	..	..	
10	Transport and Machinery Division	..	..	..	..	..	..	..	
11	Designs Division	..	..	..	..	..	..	..	
Total ..						6	27	33	
<i>Coimbatore Circle.</i>									
12	North Arcot	..	..	..	..	..	..	..	
13	Krishnagiri	..	..	..	..	7	..	7	
14	Salem	..	..	..	..	4	..	4	
15	Erode	..	..	..	..	..	..	..	
16	Coimbatore	..	..	..	..	1	13	14	
17	Palghat	..	..	..	..	1	..	1	
18	Kozhikode	..	..	..	..	2	2	4	
19	Mangalore	..	..	..	..	9	4	13	
20	Ootacamund	..	..	..	..	..	..	..	
Total ..						24	19	43	
Grand total ..						30	46	76	

ANNEXURE 22.

(i) Review of works costing over Rs. 1 lakh each in progress.

Serial number, name of works and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.		
A. GOVERNMENT ROADS.			
1. Bridges, culverts and causeways.			
1 Constructing a causeway across Palar river at M. 13/5 to 14/1 of Uttiramerur-Kancheepuram road. Estimate Rs. 1,70,000 (Chingleput Division—Central Road Fund).	83,705	88,526	Work in progress and would be completed by October 1954.
2 Constructing a bridge at M. 38/5 of Great Southern Trunk road across Palar River. Estimate Rs. 25,00,000 (Chingleput Division—Post-war Reconstruction).	0,00,657	15,77,044	Work in progress.
3 Reconstructing the bridge at M. 1/1 of Merkanam-Tindivanam road. Estimate Rs. 2,90,000 (South Arcot Division—Post-war Reconstruction).	82,348	89,572	....
4 Constructing a causeway across Agnilar at M. 6/4-5 of road No. 68—Pattukottai-Arantangi road. Estimate Rs. 2,75,000. (Tanjore Division Post-war Reconstruction).	2,22,932	2,61,423	....
5 Constructing a bridge at M. 27/1 of Karur-Kodumudi Road. Estimate Rs. 1,60,000.	1,64,562	1,90,540	Work in progress.
3,30,000 Tiruchirappalli Division—Post-war Road Development.			
6 Reconstructing the bridge at M. 66/6 of Madurai-Ramanathapuram road. Estimate Rs. 2,66,900 (Ramanathapuram Division—Post-war Reconstruction).	8,107	8,107	Tenders were not settled during 1953-54. Expenditure incurred was for the purchase of steel.
7 Constructing a bridge over the Coleroon at Anaikaran Chatram on Chidambaram-Sirkali Road. Estimate Rs. 28,50,000. (Tanjore East—Post-war Reconstruction).	15,848	18,72,343	Progress was held up for want of high tensile steel and owing to the late arrival of the French Expert.
8 Reconstructing the bridge at M. 4/8 of Calicut Balusseri road. Estimate Rs. 1,90,000 (Kozhikode Division—Post-war Road Development).	37,140	1,82,623	Work nearing completion.
9 Constructing a bridge at M. 75/8 of Taliparamba-Payyanur road. Estimate Rs. 5,23,000. (Kozhikode Division—Post-war Road Development).	44,822	73,852	....
10 Constructing a bridge at M. 331/1 of Madras-Kozhikode road. Estimate Rs. 2,00,000 (Post-war Road Development)—Coimbatore Division).	1,21,396	2,53,758	Work nearing completion.
11 Constructing a bridge across Agavalam river at M. 13/2 of Arkonam-Ocheri road—Estimate Rs. 2,00,000 (Post-war Road Development—Vellore Division).	23,649	35,391	Do.
12 Reconstructing the Poochamogar Bridge at M. 5/5 of Mudabidri-Buntwal road. Estimate Rs. 4,40,000 (Post-war Road Development—Mangalore Division).	1,44,897	1,51,284	Work in progress.
13 Constructing a bridge over Nileshwar river at M. 50/2 of Kanhangad-Charvathur road—Estimate Rs. 3,50,000. (Post-war Road Development—Mangalore Division).	1,46,744	1,48,144	Do.
14 Constructing a bridge across Hriadkadan Hole at M. 52/8 of Kanhangad—Cheuvathur road. Estimate Rs. 6,36,000 (Post-war Road Development—Mangalore Division).	25,598	25,598	Do.
15 Reconstructing the Kalmady bridge at M. 0/4 of Malpe-Udipi-Karkal road. Estimate Rs. 1,80,000 (Post-war Road Development—Mangalore Division).	72,209	1,29,561	Well sinking in all the piers was in progress.

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress—cont.

Serial number, name of works and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.		
A. GOVERNMENT ROADS—cont.			
I. Bridges, culverts and causeways—cont.			
16 Constructing a submersible bridge at M. 15/0 of Bisley Ghat road—Estimate Rs. 2,65,000 (Post-war Road Development—Mangalore Division).	15,402	49,997	Work in progress.
17 Constructing a bridge at M. 99/8 of Calicut-Mysore Frontier road. Estimate Rs. 1,25,000 (Road Development Fund—Kozhikode Division).	61,244	97,148	....
18 Constructing a bridge at M. 52/2 of Calicut-Mysore Frontier Road. Estimate Rs. 1,40,000 (Road Development Fund—Kozhikode Division).	42,538	1,02,539	....
19 Constructing a bridge at M. 55/8 of Calicut-Mysore Frontier road. Estimate Rs. 1,15,000 (Road Development Fund—Kozhikode Division).	46,236	98,614	....
20 Constructing a bridge at M. 66/7 of Calicut-Mysore Frontier road. Estimate, Rs. 1,69,000 (Road Development Fund—Kozhikode Division).	56,579	97,646	....
21 Constructing a bridge at M. 69/1 of Calicut-Mysore Frontier road. Estimate, Rs. 1,50,000 (Road Development Fund—Kozhikode Division).	41,170	1,01,277	....
22 Constructing a bridge at M. 73/1 of Calicut-Mysore Frontier road. Estimate Rs. 1,60,000 (Kozhikode Division).	43,117	70,206	....
II. Cement-concrete and black-top works.			
1 Cement concreting Cuddalore-Chittoor road M. 0-1/8. Estimate Rs. 2,10,000 (South Arcot Division—Road Development Fund).	64,433	1,55,858	....
2 Cement concreting Cuddalore-Chittoor road M. 1/6-10/0. Estimate Rs. 6,56,000 (South Arcot Division—Post-war Road Development).	89,305	7,72,008	....
3 Cement concreting Cuddalore-Chittoor road—M. 10 to 17. Estimate Rs. 5,60,000 (South Arcot Division—Road Development Fund).	2,51,390	6,29,978	....
4 Providing Wearing surface to Ramanathapuram-Mandapam road—M. 0/6 to 21/4. Estimate Rs. 10,98,000 (Ramanathapuram Division—Post-war Reconstruction).	3,92,316	9,47,275	Work nearing completion.
5 Cement concreting Tanjore-Tiruvadi and Coleroon Bank road—M. 5/0 to 8/4. Estimate Rs. 3,70,000 (Tanjore Division—Road Development Fund).	1,14,355	3,21,276	....
6 Cement concreting Tiruvadi and Coleroon Bank road. Estimate Rs. 1,14,000 (Tanjore Division—Post-war Reconstruction).	7,734	1,08,730	....
7 Black-topping Thandigudi-Ghat road. Estimate Rs. 2,20,000 (Madurai Division—Post-war Reconstruction).	96,980	2,41,331	Work was nearing completion.
8 Black-topping Madras-Calicut road, M. 231/1 to 236/5. Estimate Rs. 2,20,000 (Post-war Road Development—Salem Division).	1,23,244	1,23,244	Work in progress.
9 Cement concreting Salem Junction to Salem bye-pass road—M. 1/4 to 3/4. Estimate, Rs. 1,65,000 (Road Development Fund—Salem Division).	9,351	1,54,742	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress—cont.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.	RS.	
A. GOVERNMENT ROADS—cont.			
III. New Formations.			
1 Forming Ramanathapuram-Mandapam Road. Estimate Rs. 1,98,000 (Post-War Road Development—Ramanathapuram Division).	61,120	3,02,509	A total length of M. 21-3 had been formed and culvert works were to be taken up.
2 Formation road over Kollil Hills. Estimate Rs. 24,00,000 (Post-war Road Development—Salem Division).	2,219	2,219	....
3 Forming the unformed link from Vellore to Karivellore road of Cape Comorin-Bombay road. Estimate Rs. 3,30,000 (Post-War Road Development—Kozhikode Division).	8,905	2,68,698	Land Acquisition was pending with Revenue Department.
4 Forming a bye-pass road from M. 36/4 and 38/1 of Calicut-Cannanore road. Estimate, Rs. 2,00,000 (Post-war Road Development—Kozhikode Division).	3,027	8,027	Work in progress.

IV. Improvements and special repairs.

1 Metalling the gravelled portion in M. 135 to 1 42 of Vikravandi-Lower Anicut road. Estimate, Rs. 1,65,00,00 (Road Development Fund—South Arcot Division).	1,019	1,019	....
2 Metalling the unmetalled portion in M. 51 to 73 Vridhachalam-Salem road Estimate Rs. 2,10,000 (Post-war Road Development—South Arcot Division).	42,621	1,62,334	....
12 Improvements to Yercaud ghat road. Estimate, Rs. 2,12,000 (Post-war Road Development—Salem Division).	5,021	2,03,097	Work in progress.

B. DISTRICT BOARD ROADS.

I. Bridges, culverts and causeways.

1 Constructing a causeway at M. 13/1 of Nelvay-Tirukalkundram road. Estimate Rs. 4,25,000 (Chingleput Division)	1,30,979	1,31,322	....
2 Constructing a bridge over backwaters of Buckingham Canal near Covelong-Kelambakkam Road. Estimate Rs. 1,75,700 (Chingleput Division).	25,811	25,811	....
3 Constructing a submersible bridge at M. 110/2 of Vikravandy-Lower Anicut road. Estimate Rs. 2,20,000 (Central Road Fund—South Arcot Division).	33,354	68,303	....
4 Constructing a bridge in M. 17/6 of Mortandi-Tindivanam road. Estimate Rs. 1,02,900 (Post-war Road Development South Arcot Division).	12,567	44,589	....
5 Constructing a bridge across Kodamurutti river in Ayyampet-Ganapathi Agraharam road. Estimate Rs. 2,21,000 (Central Road Fund—Tanjore Division).	1,02,540	1,73,996	....
6 Constructing a causeway at M. 19/7 of Devakottai-Devipatnam road. Estimate Rs. 1,33,300 (Central Road Fund—Ramanathapuram Division).	85,366	86,744	Work was nearing completion.
7 Constructing a bridge over Gatana river at Ambasamudram-Alangulam road. Estimate Rs. 4,64,000 (Central Road Fund—Tirunelveli Division).	1,47,208	2,98,291	Work in progress.
8 Constructing a bridge over Karamanar river at Manapad. Estimate Rs. 2,20,000 (Central Road Fund—Tirunelveli Division).	..	..	Do.
9 Constructing a bridge across Nambiar river at M. 4/8 of Muruganchari-Tirukankudi road. Estimate Rs. 1,10,000 (Post-war Road Development—Tirunelveli Division).	14,065	1,04,643	Do.

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress—cont.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.	RS.	
B. DISTRICT BOARD ROADS—cont.			
II. Cement-concreting and black-top works—Nil.			
III. New formations.			
1 Forming a road from Rajasingamangalam to Elayangudi road. Estimate Rs. 2,40,000 (Ramanathapuram Division—Central Road Fund).	11,383	1,91,795	Land acquisition and construction of three more culverts were pending.
2 Forming a road from Elayarampannai to Guhanparai. Estimate Rs. 1,22,200 (Ramanathapuram Division—(Post-war Road Development).	3,363	51,258	Due to paucity of funds, progress was handicapped. Land acquisition was also pending.
3 Forming and metalling a road from Anjugramam to Ovari. Estimate Rs. 3,00,000 Tirunelveli Division—(Central Road Fund).	8,898	8,898	Earthwork and formation were in progress.
4 Forming a road from Kollipatti to Pasuvanthanni. Estimate Rs. 1,10,000 (Tirunelveli Division—(Central Road Fund).	6,430	6,430	Do.
5 Forming a road from Taliparamba-Kanhirangod, Chapparapadavu-Naduvil road. Estimate Rs. 2,63,200 (Post-war Road Development—Kozhikode Division).	3,918	1,75,020	....
6 Forming Cannanore-Irukkur-Mayyil Kayeralam road Estimate Rs. 2,30,000 (Excluding Post-war Road Development—Kozhikode Division).	2,386	1,02,007	....
7 Forming Padiotchal-Pulingoom road. Estimate Rs. 1,54,000. (Excluding Post-war Road Development—Kozhikode Division).	448	1,09,704	....
8 Forming a road from Chapparapadavu to connect road N. 3 at Kuttur. Estimate Rs. 2,39,000(excluding Post-war Road Development—Kozhikode Division).	6,364	1,28,167	....

IV. Improvements and special repairs—Nil.

(ii) Review of works costing over Rs. 1 lakh each completed during the year 1953-54.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.	RS.	

A. GOVERNMENT WORKS.

I. Bridges, culverts and causeways.

1 Constructing a causeway across Cheyyar river at M. 7/1-2 of Uttiramerur-Kancheepuram road. Estimate Rs. 1,96,000 (Chingleput Division).	1,64,108	2,19,425	....
2 Remodeling girder bridge at M. 41/7-8 of Salem-Cuddalore road. Estimate Rs. 1,25,000 (Post-war Road Development—Salem Division).	3,155	1,52,200	....
3 Constructing a bridge across Bharathapuzha at M. 18/2 of Angadipuram-Kuttiapuram-Cochin Frontier road. Estimate Rs. 18,50,000 (Post-war Road Development—Palghat Division).	3,44,492	18,74,948	....
4 Constructing a bridge across Payaswami river at M. 52/8 of Kalladka-Kanhanged road. Estimate Rs. 10,10,000 (Post-war Road Development—Mangalore Division).	78,965	10,49,084	Work was completed and opened for traffic on 20th October 1953.

ADMINISTRATION REPORT OF THE

ANNEXURE 22—cont.

(ii) Review of works costing over Rs. 1 lakh each completed during the year 1953-54—cont.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
	RS.	RS.	

A. GOVERNMENT WORKS—cont.

I. Bridges, culverts and causeways—cont.

5 Constructing a bridge across Swarnanadhi at Puttige at M. 13/1 of Hariadka Hebru road Estimate Rs. 4,00,000 (Post-war Road Development—Mangalore Division).	2,02,082	4,98,880	The main structure of the bridge was completed except the approach road.
6 Constructing a bridge at M. 52/8 of Mangalore-Agumbi road (Post-war Road Development—Mangalore Division).	54,523	1,17,017	Work was completed and opened for traffic.
7 Constructing the Shirur bridge at M. 79/7 of Mangalore-Balndur road. Estimate Rs. 1,40,000 (Road Development Fund—Mangalore Division).	37,478	1,17,509	....

II. Cement-concrete and black-top works.

1 Cement concreting M. 14-15 of Great Southern Trunk road. Estimate Rs. 1,40,300 (Post-war Road Development—Chingleput Division).	31,996	1,44,919	Work completed in June 1953.
2 Cement concreting Dindigul-Palni road, M. 32-34/5. Estimate Rs. 2,20,000 (Post-war Road Development—Madurai Division).	67,849	1,39,049	Work completed.
3 Cement concreting Tenkasi-Madurai road, M. 33 to 44. Estimate Rs. 9,75,000 (Ramanathapuram Division).	5,26,026	9,65,913	....
4 Cement concreting Pollachi-Meenkarai road, M. 1/5 to 5/0. Estimate Rs. 2,75,000 (Post-war Road Development—Coimbatore Division).	..	2,17,379	Work completed.
5 Cement concreting Cuddalore-Chittoor road, M. 122/0 to 126/3. Estimate Rs. 4,50,000 (Post-war Road Development—Vellore Division, Central Road Fund).	80,667	3,84,450	Main work. Cement-concrete laying completed.
6 Providing dutlees surfacing to Mangalore-Balndoor coasts road. Estimate Rs. 1,08,000 (Post-war Road Development—Mangalore Division).	52,082	1,20,228	Work completed.
7 Cement concreting Tellicherry-Coorg road, M. 0/0, 200, to 1/7-6 feet. Estimate Rs. 2,30,000 (Road Development Fund—Kozhikode Division).	86,661	2,21,044	....

III. New formations.

Tiruchirappalli Circle—Nil.
Coimbatore Circle—Nil.

IV. Improvements and special repairs.

1 Improvement to Madras-Mahabalipuram road. Estimate Rs. 3,24,000 (Post-war Road Development—Chingleput Division).	2,20,505	3,71,236	Work completed.
2 Widening the metalled width of M. 0/4 to 34/4 of Periakulam-Kumili road. Estimate Rs. 2,40,000 (Road Development Fund—Madurai Division).	6,797	2,08,226	Do.
3 Improvements to Mangalore-Agumbi road, M. 58/4 to 61/4. Estimate Rs. 1,12,000 (Post-war Road Development—Mangalore Division).	8,152	65,843	....

ANNEXURE 22—cont.

(fi) Review of works costing over Rs. 1 lakh completed during the year 1953-54—cont.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks
(1)	(2)	(3)	(4)
	RS.	RS.	

B. DISTRICT BOARD WORKS.

I. Bridges, culverts and causeways.

Constructing a submersible bridge at M. 25/4 of Elayangudi-Paramagudi road. Estimate Rs. 4,82,000 (Central Road Fund—Ramanathapuram Division).	1,88,874	4,68,740	
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II. Cement-concrete and black-top works.

Tiruchirappalli Circle—Nil.
Coimbatore Circle—Nil.

III. New formations.

Tiruchirappalli Circle—Nil.
Coimbatore Circle—Nil.

IV. Improvements and special repairs.

Tiruchirappalli Circle—Nil.
Coimbatore Circle—Nil.

ANNEXURE 23.

(i) Review of works costing less than Rs. 1 lakh each in progress during 1953-54.

Serial number and name of division	Government works.				District Board works.			
(1)	Total number of works. (2)	Total cost. (3)	Total expenditure. (4)	Remarks. (5)	Total number of works. (6)	Total cost. (7)	Total expenditure. (8)	Remarks. (9)
		RS.	RS.			RS.	RS.	
<i>Tiruchirappalli Circle.</i>								
1 Chingleput	1	33,000	10,461	....	1	36,000	15,673	....
2 South Arcot	6	2,53,100	79,363	....	1	33,000	13,567	....
3 Nagapattinam .. ..	..	..	..	....	7	3,53,300	22,402	....
4 Tanjore .. ..	..	..	..	....	7	1,37,150	51,324	....
5 Tiruchirappalli	2	1,22,800	..	....	..	..	..	....
6 Madurai .. ..	..	..	..	....	..	..	..	....
7 Ramanathapuram	5	90,900	55,619	....	13	2,01,250	78,911	....
8 Tirunelveli	5	1,06,500	22,130	....	34	3,42,760	1,55,952	....
9 Coleroon Bridge Division .. ..	..	..	..	....	..	..	..	....
10 Transport and Machinery Division .. ..	..	..	..	....	..	..	..	....
Total	19	6,11,300	1,67,636		63	11,03,460	3,45,829	
<i>Coimbatore Circle.</i>								
11 North Arcot .. ..	..	..	..	....	..	..	..	....
12 Salem	10	21,000	7,183	....	14	5,96,870	1,73,321	....
13 Krishnagiri	1	8,500	23,746	....	4	..	22,363	....
14 Erode	5	35,150	..	....	..	2,31,000	..	....
15 Coimbatore	2	1,12,000	59,039	....	3	..	8,357	....
16 Palghat	10	13,400	5,876	....	..	73,500	..	....
17 Kozhikode	4	21,000	20,449	....	3	1,56,400	85,073	....
18 Mangalore	7	1,23,000	93,265	....	1	16,400	5,845	....
19 The Nilgiris .. ..	..	..	..	....	4	2,27,500	58,259	....
Total	39	3,37,050	2,09,558		29	13,01,670	3,58,218	
Grand total	58	9,48,350	3,77,194		92	24,05,130	7,05,047	

11. Cement-concrete and uacc-topping.

<i>Tiruchirappalli Circle.</i>								
1 Chingleput .. ..	..	..	..	....	..	..	..	....
2 South Arcot .. ..	..	..	..	....	..	..	..	....
3 Nagapattinam .. ..	..	..	..	....	..	..	..	....
4 Tanjore .. ..	..	..	..	....	..	..	..	....
5 Tiruchirappalli .. ..	..	..	..	....	..	..	..	....
6 Madurai .. ..	..	..	..	....	..	..	..	....
7 Ramanathapuram .. ..	..	..	..	....	..	..	..	....
8 Tirunelveli	12	6,22,200	4,23,525	....	34	8,42,760	1,55,952	....
9 Coleroon Bridge Division .. ..	..	..	..	....	..	..	..	....
Total	12	6,22,200	4,23,525		34	8,42,760	1,55,952	
<i>Coimbatore Circle.</i>								
10 North Arcot .. ..	..	..	..	....	..	..	..	....
11 Salem .. ..	..	..	..	....	..	..	..	....
12 Krishnagiri .. ..	..	..	..	....	..	..	..	....
13 Erode .. ..	..	..	..	....	..	..	..	....
14 Coimbatore .. ..	..	..	..	....	..	..	..	....
15 Palghat	15	4,32,480	1,33,745	....	..	..	..	....
16 Kozhikode	1	8,000	5,147	....	..	..	..	....
17 Mangalore .. ..	..	..	..	....	..	..	..	....
18 Ootacamund	1	27,500	15,239	....	..	..	..	....
Total	17	51,79,300	2,04,131		..	..	..	
Grand Total	29	11,30,180	6,32,656		34	8,42,760	1,55,952	
<i>Tiruchirappalli Circle.</i>								
1 Chingleput .. ..	..	..	..	....	4	1,01,000	97,233	....
2 South Arcot .. ..	..	..	..	....	33	5,77,200	99,241	....
3 Nagapattinam .. ..	..	..	..	....	11	63,200	10,352	....
4 Tanjore .. ..	..	..	..	....	42	3,11,750	24,472	....
5 Tiruchirappalli .. ..	..	..	..	....	18	2,45,400	1,59,181	....
6 Madurai	1	99,000	1,05,532	....	76	8,40,000	2,56,788	....
7 Ramanathapuram .. ..	..	..	..	....	53	11,00,820	1,24,668	....
8 Tirunelveli .. ..	..	..	..	....	19	5,88,290	2,09,307	....
9 Coleroon Bridge Division .. ..	..	..	..	....	..	..	..	....
Total	1	99,000	1,05,532		261	38,27,570	9,81,232	

III. New formations.

ANNEXURE 23—cont.

(i) Review of works costing less than Rs. 1 lakh each in progress during the year 1953-54—cont.

Serial number and name of circle and division.	Government works.			District Board works.		
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total expenditure.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		RS.	RS.			RS.
<i>Coimbatore Circle.</i>						
10 North Arcot ..	..	..	..	..	40	3,69,440
11 Salem ..	..	..	..	..	6	3,661
12 Krishnagiri ..	..	..	..	..	8	11,800
13 Erode ..	..	..	..	..	13	28,084
14 Coimbatore ..	..	..	..	..	22	5,04,981
15 Palghat ..	..	..	..	..	1	18,365
16 Kozhikode ..	..	..	..	..	90	5,60,841
17 Mangalore ..	..	..	..	..	351	15,48,123
18 Ootacamund ..	..	..	..	..	..	..
Total ..	1	99,000	1,05,532	..	..	..
Grand Total ..	..	..	..	..	..	..
<i>Tiruchirappalli Circle.</i>						
1 Chingleput ..	..	..	..	..	1	38,083
2 South Arcot ..	..	..	..	..	27	1,26,927
3 Nagapattinam ..	..	..	..	..	9	38,068
4 Tanjore ..	..	9,050	9,149	..	..	..
5 Tiruchirappalli ..	..	..	..	..	10	43,169
6 Madurai ..	..	..	..	..	..	..
7 Ramanathapuram ..	..	..	..	..	..	..
8 Tirunelveli ..	..	..	..	..	..	..
9 Coleroon Bridge Division ..	..	..	..	..	..	..
Total ..	4	9,050	9,149	..	47	2,40,127
<i>Coimbatore Circle.</i>						
10 North Arcot ..	..	..	..	..	..	..
11 Salem ..	..	25,000	15,731	..	37	1,32,080
12 Krishnagiri ..	..	..	..	..	8	87,950
13 Erode ..	..	..	..	..	..	..
14 Coimbatore ..	..	..	..	..	..	..
15 Palghat ..	..	9,950	4,264	..	2	65,774
16 Kozhikode ..	..	..	..	..	..	..
17 Mangalore ..	..	..	..	..	..	..
18 Ootacamund ..	..	..	..	..	..	..
Total ..	2	34,950	19,995	..	47	2,87,980
Grand Total ..	6	44,000	29,144	..	94	3,79,667

IV. Improvements and special repairs.

(ii) Review of works costing less than Rs. 1 lakh each completed during the year 1953-54.

Serial number and name of circle and division.	Government works.			District Board works.		
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total expenditure.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		RS.	RS.			RS.
<i>Tiruchirappalli Circle.</i>						
1 Chingleput ..	3	1,87,500	2,70,780	..	5	61,500
2 South Arcot ..	7	1,15,100	28,633	..	3	36,500
3 Nagapattinam ..	..	..	..	..	6	1,12,900
4 Tanjore ..	..	..	..	..	..	..
5 Tiruchirappalli ..	..	..	..	..	..	..
6 Madurai ..	..	..	..	..	..	..
7 Ramanathapuram ..	4	54,700	49,366	..	8	84,700
8 Tirunelveli ..	8	1,92,700	1,80,765	..	45	1,64,890
9 Coleroon Bridge Division ..	..	..	..	..	..	..
Total ..	22	5,00,000	5,27,724	..	67	4,60,490
<i>Coimbatore Circle.</i>						
10 North Arcot ..	..	..	..	..	..	..
11 Salem ..	..	..	..	..	..	..
12 Krishnagiri ..	..	..	..	..	..	..
13 Erode ..	4	25,000	27,126	..	..	..
14 Coimbatore ..	..	..	..	..	6	1,50,600
15 Palghat ..	..	..	..	..	..	..
16 Kozhikode ..	..	..	..	..	..	..
17 Mangalore ..	11	1,24,500	1,28,607	..	..	..
18 Ootacamund ..	..	..	..	..	..	..
Total ..	15	1,49,500	1,55,733	..	6	1,50,600
Grand Total ..	37	6,49,500	6,83,457	..	73	6,11,090

I. Bridges, culverts and causeways.

ANNEXURE 23—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during the year 1953-54—cont.

(1) Sl number and name circle and division.	Government works.			District Board works.			Remarks. (9)
	Total number of works. (2)	Total cost. (3) RS.	Total expendi- ture. (4) RS.	Remarks. (5)	Total number of works. (6)	Total cost. (7) RS.	Total expendi- ture. (8) RS.
II. Cement concrete and black-topping							
Tiruchirappalli Circle.							
Chingleput ..	..	..	..	....	..	..	..
South Arcot ..	..	..	..	....	..	..	..
Nagapattinam ..	31	..	5,76,095	....	..	..	..
Tanjore, East ..	..	..	..	....	..	..	..
Tiruchirappalli ..	..	..	..	....	..	..	..
Madurai ..	1	8,395	34,817	....	..	..	..
Ramanathapuram ..	..	..	..	....	6	1,21,960	13,452
Tirunelveli ..	11	4,42,900	3,65,260	....	..	..	..
Coleroon Bridge Division ..	..	..	..	....	..	..	..
Total ..	43	4,46,295	9,76,172		6	1,21,960	13,452
Coimbatore Circle.							
North Arcot ..	..	..	..	....	..	..	..
Madurai ..	..	..	..	....	..	..	..
Tiruchirappalli ..	..	..	..	....	..	..	..
Madurai ..	..	..	..	....	..	..	..
Ramanathapuram ..	..	..	..	....	2	12,500	4,661
Tirunelveli ..	..	..	..	....	..	..	..
Coleroon Bridge Division ..	..	..	..	....	..	..	..
Total ..	43	4,46,295	9,76,172		3	1,34,460	18,113
Grand Total ..	43	4,46,295	9,76,172		9	2,56,425	21,565

III.—New formations.

Tiruchirappalli Circle.

Chingleput ..	..	..	..	....	4	36,200	31,905	..
South Arcot ..	..	..	..	....	1	2,300	341	..
Nagapattinam ..	..	..	..	....	20	95,400	20,120	..
Tanjore ..	..	..	..	....	..	..	..	..
Tiruchirappalli ..	..	..	..	....	19	1,82,300	1,48,363	..
Madurai ..	..	..	..	....	4	46,450	57,992	..
Ramanathapuram ..	..	..	..	....	3	65,500	6,447	..
Tirunelveli ..	..	..	..	....	45	11,12,825	7,90,594	..
Coleroon Bridge Division ..	..	..	..	....	..	..	..	..
Total ..	..	..	..		96	15,20,775	10,94,762	

Coimbatore Circle.

North Arcot ..	..	..	..	....	..	..	..	..
1 Salem ..	..	..	..	....	..	..	..	..
2 Krishnagiri ..	..	..	..	....	..	..	..	..
3 Erode ..	..	..	..	....	10	30,000	25,739	..
4 Coimbatore ..	..	..	..	....	20	1,29,900	62,048	..
5 Palghat ..	..	..	..	....	..	..	..	..
6 Kozhikode ..	..	..	..	....	..	..	..	..
7 Mangalore ..	..	..	..	....	..	..	..	..
8 Ootacamund ..	..	..	..	....	..	..	..	..
Total ..	..	..	..		30	1,59,900	87,837	
Grand Total ..	..	..	..		126	16,80,675	11,62,599	

Tiruchirappalli Circle.

IV. Improvements and special repairs.

Chingleput ..	..	..	..	....	2	37,000	28,753	..
South Arcot ..	..	..	..	....	6	1,82,000	16,738	..
Nagapattinam ..	..	..	..	....	12	2,09,400	1,21,106	..
Tanjore ..	..	..	..	....	..	..	..	..
Tiruchirappalli ..	..	..	..	....	..	..	..	..
Madurai ..	..	..	..	....	..	..	..	..
Ramanathapuram ..	..	..	..	....	6	1,21,960	13,452	..
Tirunelveli ..	..	..	..	....	..	..	..	..
Coleroon Bridge Division ..	..	..	..	....	..	..	..	..
Total ..	..	..	..		26	5,30,360	1,80,139	

ANNEXURE 23—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during the year 1953-54—cont.

Serial number and name of circle and division.	Government works.				District Board works.			
	Total number of works. (2)	Total cost. (3)	Total expenditure. (4)	Remarks. (5)	Total number of works. (6)	Total cost. (7)	Total expenditure. (8)	Remarks. (9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RS.	RS.			RS.	RS.	
<i>IV Improvements and special repairs—cont.</i>								
<i>Goimbatore Circle.</i>								
10 North Arcot ..	..	..	..		..	..	..	
11 Salem ..	..	..	..		..	..	..	
12 Krishnagiri ..	..	..	..		..	..	..	
13 Erode ..	..	..	..		..	..	..	
14 Coimbatore ..	..	..	..		..	..	..	
15 Palghat ..	..	..	..		..	..	..	
16 Kozhikode ..	..	..	..		..	..	..	
17 Mangalore ..	..	..	..		..	..	..	
18 Ootacamund ..	..	..	..		..	..	..	
Total ..	..	..	..		..	..	..	
Grand Total ..	..	..	..		26	5,30,360	1,80,139	

IV Improvements and special repairs—cont.

ANNEXURE 24.

Statement showing the quantities of materials used, etc.

Serial number and materials.	Brought forward from the previous year.			Purchased during the year.			Utilised on works during the year.			Balance on hand.		
	Quantity.	Cost.	RS. IN LAKHS.	Quantity.	Cost.	RS. IN LAKHS.	Quantity.	Cost.	RS. IN LAKHS.	Quantity.	Cost.	RS. IN LAKHS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>(i) Government Roads.</i>												
1 Steel (in tons)	..	..	..	1,390.13	6.578	1,536.46	8.450	1,405.58	6.404	1,521.01	8.924	1,521.01
2 Cement (in tons)	..	..	..	3,117.01	3.050	9,789.82	7.833	9,680.29	7.703	3,246.54	3.180	3,246.54
3 Bitumen (in tons)	..	..	..	4,486.86	18.943	16,592.06	59.933	16,626.18	62.086	4,452.74	16.790	4,452.74
4 Oils (in gallons)	..	..	..	6,916.25	.318	39,895.34	1.719	34,442.04	1.323	12,369.55	.714	12,369.55
5 Fuel oils (in gallons)	..	..	..	4,608.25	.137	47,967.00	1.793	44,831.40	1.318	7,748.75	.612	7,748.75
6 Coal (in tons)	..	..	..	465.15	.180	1,456.97	.517	1,156.49	.430	755.63	.267	755.63
7 Hume pipes (in r.ft.)	..	..	..	7,074.25	.333	5,186.00	.542	8,699.25	.521	3,561.00	.359	3,561.00
8 Timber (in tons)	..	..	..	52.00	.005	434.25	.080	472.25	.084	12.00	.001	12.00
9 Other materials	..	..	..	..	1.866	..	12.921	..	9.554	..	5.233	..
1 Steel (in tons)	..	..	..	527.01	2.363	580.5	1.739	453.60	1.669	653.94	2.438	653.94
2 Cement (in tons)	..	..	..	1,905.73	1.318	3,536.6	3.155	4,084.55	3.184	1,407.81	1.289	1,407.81
3 Bitumen (in tons)	..	..	..	311.01	1.862	1,130.9	6.922	1,148.47	6.863	293.48	1.921	293.48
4 Fuel oils (in gallons)	..	..	..	..	..	1,411.00	0.035	1,411.00	0.035	..	..	..
5 Oils (in gallons)	..	..	..	..	..	681.50	0.023	681.50	0.023	..	..	..
6 Coal (in tons)	..	..	..	..	..	7.50	0.002	7.50	0.002	..	..	..
7 Timber (in tons)	..	..	..	165.00	0.015	689.36	99.290	734.02	99.294	120.34	0.011	120.34
8 Hume pipes (in r.ft.)	..	..	..	13,290.75	1.921	8,420.00	2.056	9,545.75	1.758	12,165.00	2.219	12,165.00
9 Other materials (in tons)	..	..	..	10,227.83	2.406	2,697.00	3.129	12,570.00	5.479	354.83	0.059	354.83

(ii) District Board Roads.

ANNEXURE 25.

Inventory of plant and machinery as on 31st March 1954.

Serial number, name of plant and machinery.	Number available.	Serial number, name of plant and machinery.	Number available.
TIRUCHIRAPPALLI CIRCLE.			
<i>Chingleput Division.</i>		<i>Tanjore—cont.</i>	
1 Rollers	25	5 Heat master	1
2 Lorries	4	6 Heat sprayer	1
3 Concrete mixers	1	7 Asphaltmixer	1
4 Jeep	1	8 Stone crusher	1
5 Heat masters	10	9 Grader	1
6 Rotary drum mixers	6	10 Tipper van	1
7 Vibrators	3		
8 Grader	1	<i>Tiruchirappalli.</i>	
9 Air compressors	2	1 Rollers	22
10 Barrow mixers	9	2 Lorries	10
11 Hot mix plants	2	3 Concrete mixer	1
12 Tractor water carts	3	4 Jeep	1
13 Calyx drill	1	5 Tar boiler	1
14 Sump pumps	2	6 Heat masters	5
15 Pump sets	4	7 Vibrators	3
16 Avery testing machine	1	8 Pump sets	2
<i>South Arcot.</i>		<i>Madurai.</i>	
1 Rollers	21	1 Rollers	36
2 Lorries	5	2 Lorries	12
3 Concrete mixers	8	3 Concrete mixers	4
4 Hand pumps	2	4 Jeeps	2
5 Jeep	1	5 Tar boiler	1
6 Tar boilers	4	6 Heat masters	3
7 Heat masters	2	7 Vibrators	2
8 Rotary drums	75	8 Grader	1
9 Water tanks	4	9 Barrow mixers	5
10 Pontoons	5	10 Pump sets	2
11 Asphalt mixer	1	11 Land rover	1
12 Vibrators	5		
13 Stone crusher	1	<i>Ramanathapuram.</i>	
14 Grader	1	1 Rollers	27
15 Ramped cargo lighter	1	2 Lorries	5
16 Water carts	6	3 Concrete mixers	4
17 Barrow mixers	4	4 Heat masters	2
18 Trailer water carts	8	5 Jeeps	2
19 Pumps sets	3	6 Tar boilers	2
20 Diesel engine	1	7 Rotary drums	48
<i>Nagapattinam.</i>		8 Asphalt mixer	1
1 Rollers	19	9 Vibrators	2
2 Lorries	2	10 Tractors	2
3 Concrete mixers	2	11 Graders	2
4 Hand pumps	2	12 Seaman's mixer	1
5 Jeep	1	13 Air compressor	1
6 Tar boilers	2	14 Pump sets	5
7 Wheel barrows	6		
8 Rotary drums	9	<i>Tirunelveli.</i>	
9 Water tanks	4	1 Rollers	21
10 Pontoons	4	2 Lorry	1
11 Nissen Sheds	2	3 Concrete mixers	2
<i>Tanjore.</i>		4 Hand pump	1
1 Rollers	18	5 Heat masters	4
2 Lorries	4	6 Rotary drums	38
3 Concrete mixers	2		
4 Tar boilers	2		

ANNEXURE 25—cont.

Inventory of plant and machinery as on 31st March 1953—cont.

Serial number, name of plant and machinery.	Number available.	Serial number, name of plant and machinery.	Number available.
TIRUCHIRAPPALLI CIRCLE—cont.			
<i>Coleroon Bridge Division.</i>		<i>Transport and Machinery Division.</i>	
1 Concrete mixers	4	1 Rollers	2
2 Vibrators	2	2 Lorries	4
3 Pulley blocks	6	3 Jeep	1
4 Winches	6	4 Tractors	2
5 Air compressors	7	5 Bull dozer	1
6 Sump pumps	2	6 Graders	6
7 Avery testing machine	1	7 Land rover	1
8 Crab	6	8 Tractor Tanker	1
9 Diving equipment with an hel-met.	1	9 VanBed (ford)	1
10 Pump sets	3	10 Mobile workshop van	1
		11 Trailer (Ford)	1
COIMBATORE CIRCLE.			
<i>Krishnagiri.</i>		<i>Erode—cont.</i>	
1 Rollers	17	4 Tar boilers	6
2 Lorries	4	5 Concrete mixers	2
3 Jeep	1	6 Heat masters	2
4 Tar boilers	3	7 Barrow mixers	3
5 Concrete mixers	5		
6 Pump sets	2	<i>Coimbatore.</i>	
7 Barrow mixers	6	1 Rollers	12
8 Pile driving machine	1	2 Lorries	7
9 Hand drum mixers	36	3 Jeeps	2
<i>Salem.</i>		4 Concrete mixers	4
1 Rollers	14	5 Grader	1
2 Lorries	4	6 Heat masters	2
3 Jeep	1		
4 Tar boilers	4	<i>Ootacamund.</i>	
5 Concrete mixer	1	1 Rollers	8
6 Vibrator	1	2 Lorries	2
7 Hand drum mixers	28	3 Jeep	1
<i>Palghat.</i>		4 Heat masters	3
1 Rollers	24	5 Stone crusher	1
2 Lorries	7		
3 Jeeps	2	<i>Kozhikode.</i>	
4 Tar boilers	3	1 Rollers	19
5 Concrete mixers	3	2 Lorries	4
6 Heat masters	3	3 Jeeps	2
7 Barrow mixers	5	4 Tar boilers	2
8 Vibrator	1	5 Concrete mixers	3
9 Hand drum mixers	36	6 Pump set	1
<i>Mangalore.</i>		7 Heat masters	1
1 Rollers	25	8 Vibrator	1
2 Lorries	8	9 Asphalt mixer	1
3 Jeeps	3	10 Hand drum mixers	22
4 Concrete mixers	3		
5 Heat masters	6	<i>Vellore.</i>	
6 Vibrator	1	1 Rollers	26
7 Asphalt mixers	2	2 Lorries	4
8 Concrete plant	1	3 Jeep	1
<i>Erode.</i>		4 Tar boiler	1
1 Rollers	24	5 Concrete mixers	2
2 Lorries	2	6 Heat masters	4
3 Jeeps	2	7 Barrow mixers	12
		8 Vibrator	1
		9 Asphalt mixer	1
		10 Hand drum mixers	34

ANNEXURE 26.

Statement of avenues.

Serial number and name of division.	Government roads.					
	Total mileage.	Number of avenues.	Number newly planted during the year.	Number of new plantations that have survived.	Expenditure.	Income.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TIRUCHIRAPPALLI CIRCLE.						
1 Chingleput	658	75,657	15,857	12,352	69,707	26,470
2 South Arcot	560	80,000	8,542	5,810	40,635	34,821
3 Nagapattinam	289	44,418	1,437	1,400	9,738	8,803
4 Tanjore	400	32,341	5,032	4,211	15,583	11,629
5 Tiruchirappalli	774	103,105	5,343	4,968	54,984	33,021
6 Madurai	642 + 5	3,207	6,677	2,305	3,365	22,350
7 Ramanathapuram	464 + 22	44,674	5,369	4,509	14,058	13,784
8 Tirunelveli	458	36,595	2,119	623	14,356	19,199
9 Coleroon Bridge Division.	..	..	..	..	..	..
10 Transport and Machinery.	..	..	..	..	..	..
11 Designs Division	..	..	..	..	..	..
Total	4,251	419,997	70,376	36,178	2,22,426	1,70,077

COIMBATORE CIRCLE.						
12 North Arcot	656	112,300	9,434	8,528	63,768	84,586
13 Salem	391	41,784	2,375	2,375	34,700	3,067
14 Krishnagiri	422	49,683	968	726	19,116	1,37,355
15 Erode	497	36,098	8,714	8,203	61,422	5,821
16 Coimbatore	529	13,637	458	458	4,869	17,497
17 Ootacamund	204	65	5	5	..	..
18 Palghat	606	10,434	1,270	711	3,204	17,600
19 Kozhikode	359	25,425	1,319	425	2,049	5,265
20 Mangalore	689	47,551	2,514	1,804	1,383	6,488
Total	4,353	3,36,977	27,057	23,235	1,90,511	2,77,679
Grand Total	8,606	756,974	77,433	59,413	4,12,937	4,47,756

ANNEXURE 26—cont.

Statement of avenues—cont.

Serial number and name of division.	District Board roads.					
	Total mileage.	Number of avenues.	Number newly planted during the year.	Number of new plantations that have survived.	Expenditure.	Income.
	(8)	(9)	(10)	(11)	(12)	(13)
TIRUCHIRAPPALLI CIRCLE.						
1 Chingleput	1,075	19,408	2,258	1,417	5,490	..
2 South Arcot	1,443	58,165	5,686	2,807	16,737	18,726
3 Nagapattinam	1,128	37,882	476	400	3,920	..
4 Tanjore	996	27,782	3,357	2,761	4,252	3,531
5 Tiruchirappalli	1,770	43,340	3,093	2,877	30,802	13,448
6 Madurai	1,399	3,903	2,974	1,095	..	8,317
7 Ramanathapuram	914	21,831	3,173	2,208	16,821	3,079
8 Tirunelveli	1,088	29,169	2,192	1,606	7,011	7,196
9 Coleroon Bridge Division.	..	..	..	..	..	..
10 Transport and Machinery.	..	..	..	..	..	..
11 Designs Division	..	..	..	..	..	..
Total	9,813	241,480	23,209	15,171	85,033	54,297

COIMBATORE CIRCLE.						
12 North Arcot	986	63,230	2,640	2,205	9,536	41,11
13 Salem	808	24,566	5,237	5,148	18,590	..
14 Krishnagiri	903	38,857	663	498	2,179	73,637
15 Erode	1,507	19,493	1,406	813	5,096	3,260
16 Coimbatore	1,076	7,220	306	88	1,018	724
17 Ootacamund	397	..	..	..	..	..
18 Palghat	510	27,772	1,030	400	1,761	7,492
19 Kozhikode	523	32,154	682	442	266	583
20 Mangalore	778	23,294	..	..	..	2,389
Total	7,488	236,586	11,964	9,594	38,446	1,29,221
Grand Total	17,301	478,066	35,173	24,765	1,23,479	1,83,518

17. *Percentage of encroachments detected and disposed of during the year 1953-54.*

(i) Statement showing the particulars of encroachments detected and disposed of during the year.													
Serial number and name of district.	Number of encroachments pending disposal at the commencement of the year.		Number of encroachments detected during the year.		Number of encroachments detected and disposed of during the year.		Number of objectionable encroachments evicted during the year.		Number of encroachments pending disposal at the end of the year.				
	Municipal area.		Non-municipal area.		Municipal area.		Non-municipal area.		Municipal area.		Non-municipal area.		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
(1)													
1 Chingleput	..	..	..	..	..	..	..	..	..	..	..	..	..
2 South Arcot	..	1,874	316	239	79	706	3	6	54	931	9	270	329
3 Tanjore	..	843	611	646	1,643	408	1,650	509	219	29	200	483	185
4 Tiruchirappalli	..	6	1,065	122	427	3	14	16	92	34	652	75	734
5 Madurai	..	253	581	181	189	1	70	58	17	12	102	368	581
6 Ramanathapuram	..	547	..	851	..	286	..	145	..	167	..	800	..
7 Tirunelveli	..	1	1,120	5	1,087	..	1,458	1	166	..	60	5	523
8 North Arcot	..	1,921	1,774	1,065	367	717	59	1,564	124	335	313	70	1,645
9 Salem	..	2,499	792	294	138	68	1	457	86	28	728	2,240	165
10 Coimbatore	..	136	724	191	1,064	232	749	2	317	32	847	61	375
11 Malabar	..	3	34	7	202	6	124	7	51	1	51	1	10
12 Nilgiris	..	..	100	..	39	..	1	..	40	..	98	..	..
13 South Kanara	..	90	150	63	125	23	17	6	52	27	206	97	..
Total	7,678	7,267	3,664	5,360	2,510	4,146	2,766	1,168	1,596	2,766	4,470	4,517	..

(ii) Statement showing the particulars of encroachments detected and disposed of during the year 1953-54 on District Board Roads.

Serial number and name of district.	Number of encroachments pending disposal at the commencement of the year.			Number of encroachments detected during the year.			Number of objectionable encroachments licensed during the year.			Number of objectionable encroachments evicted during the year.			Number of encroachments pending disposal at the end of the year.			
	(1)	Municipal Non-municipal area.		(4)	Municipal Non-municipal area.		(6)	Municipal Non-municipal area.		(8)	Municipal Non-municipal area.		Objectionable.		(13)	
		(2)	(3)		(5)	(7)		(9)	(10)		(11)	(12)				
Tiruchirappalli Circle—																
Chingleput ..	..	88	..	55	..	109	..	..	..	..	..	..	84	..	..	
North Arcot ..	..	219	..	181	..	36	..	..	..	76	..	..	88	..	200	
Ngapattinam]	..	67	..	51	..	5	..	..	..	82	..	..	31	..	..	
Tanjore ..	..	38	..	268	..	..	..	..	..	136	..	..	165	..	..	
Tiruchirappalli ..	..	38	..	40	..	20	..	..	..	45	..	..	8	..	5	
Madurai ..	..	62	..	68	..	47	..	..	..	13	..	..	70	..	..	
Ramanathapuram ..	..	127	..	908	..	876	..	..	..	16	..	..	134	..	4	
Tirunelveli ..	..	32	..	111	..	26	..	..	..	51	..	..	66	..	..	
Total ..	..	671	..	1,672	..	1,119	..	..	..	419	..	..	596	..	209	
Coimbatore Circle—																
North Arcot ..	..	7	..	4	..	..	..	..	..	10	..	..	1	..	..	
Salem ..	..	78	..	94	..	..	..	..	..	54	..	..	118	..	..	
Krishnagiri ..	..	155	..	145	..	13	..	..	..	149	..	..	138	..	..	
Coimbatore ..	..	..	..	4	..	..	..	..	..	2	..	..	32	..	..	
Erode ..	..	41	..	25	..	7	..	..	..	23	..	..	36	..	..	
Ootacamund ..	..	23	..	9	..	..	..	..	..	14	..	..	11	..	..	
Palghat ..	..	1	..	5	..	2	..	..	..	..	..	..	5	..	7	
Kozhikode ..	..	2	..	92	..	1	..	..	..	43	..	..	46	..	..	
Mangalore ..	..	30	..	21	..	2	..	..	..	17	..	..	21	..	11	
Total ..	..	368	..	399	..	25	..	..	..	312	..	..	408	..	22	
Grand total)	..	1,039	..	2,071	..	1,144	..	..	..	731	..	..	1,004	..	231	

ANNEXURE 28.

Statement of ferries maintained by the department.

Name of division. (1)	Serial number and name of ferry. (2)	Number and size of boats available. (3)	Revenue (lease amount). (4) RS.
South Arcot	1. Ferry at M.1/1 of Merkanam-Tindivanam road.	1 Ramped cargo lighter ..	9,381
Tanjore	2. Sundaraperumal Koil.	1 boat 10' diameter x 3' ..	180
	3. Parithukudi	1 boat 12' x 4' x 3' ..	
Nagapattinam	4. Gopalamudram across Cole-roon.	1 boat 25' x 8' ..	370
	5. Elangudi across Odambokiar.	1 do. ..	
	6. Engan across Vetter ..	1 do. ..	17,710
Tiruchirappalli	7. Kamanaikenpalayam ..	4 of 12' diameter ..	
	8. Manapalli	3 do. ..	
	9. Kulitalai (Musiri) ..	8 do. ..	
	10. Tirumanur	6 do. ..	
	11. Tirumalavadi, Vythinatham-petai.	4 do. ..	11
Madurai	12. Narikalpatty	1 boat 7' x 5' x 6' ..	
	13. Perichipalayam	1 do. ..	
	14. Mavanghat	1 do. ..	
Ramanathapuram	15. Kottagudi	1 boat 20' x 3' x 1½' ..	225
Tirunelveli	16. Vilatikulam	1 boat 32' x 5½' x 2' ..	55
Malabar, South	17. Karimpuzha	2 Nos. 20' x 3' 6" x 1'9" ..	1,205
	18. Chunangad	1 do. ..	200
	19. Nangatri	2 do. ..	10,000
	20. Thirthala Varada, kutti kadavu.	2 do. ..	1,350
	21. Mallan alias Chattampara	2 do. ..	1,900
	22. Chamaravattam	2 do. ..	5,290
Kozhikode	23. Baliapatnam ferry ..	2 jangadams and 3 boats of 25' x 4½' x 2½' ..	60,886
	24. Kuppam ferry	1 jangadam and 3 boats of 25' x 4½' x 2½' ..	
	25. Panamaram	1 jangadam and 1 boat (20' x 2½' x 2½') ..	
	26. Chaliyam ferry	1 jangadam and 2 boats (25' x 4½' x 2½') ..	
	27. Perumbayi ferry	1 jangadam and 3 boats (21' x 4½' x 2½') ..	50
Krishnagiri	28. Grumathur Ferry .. ..	.. ..	
Mangalore	29. Bolar	6 Nos. 27' x 2½' x 2' ..	20
	30. Peranje	8 do. ..	18,850
	31. Malky	8 do. ..	17,575
	32. Chandragiri	5 do. ..	2,050
	33. Shira	5 do. ..	355
	34. Kariangote	2 do. ..	1,900
	35. Chittara	2 do. ..	1,450
	36. Mogral	2 do. ..	425
	37. Karipara	2 do. ..	650
	38. Uppala	2 do. ..	601
	39. Bekal	2 do. ..	590
	40. Kallathukare	2 do. ..	5,300
	41. Thekkil	2 do. ..	13,800
	42. Hosmat	2 do. ..	500
	(Closed on 21st October 1953).		
	43. Mebukal	10 Nos. 27' x 2½' x 2' ..	18,000
	44. Bhadrargiri	10 do. ..	25,090
	45. Udiyavar	10 do. ..	85,500
	(Three years lease from 1st April 1953 to 31st March 1956).		
	46. Puttige	2 Nos. 27' x 2½' x 2' ..	750
	47. Gangolli	7 do. ..	5,100
	48. Hangarahole	2 do. ..	16,070
	49. Kandalur	2 do. ..	675
	50. Wandse	2 do. ..	775
	51. Jadkal	1 No. 24' x 2' x 1½' ..	115
	52. Pooch mogar	2 do. ..	305
	53. Malpe	2 do. ..	1,200
	54. Sarda	2 Nos. 27' x 2½' x 2' ..	360
	55. Halady	2 „ 24' x 2½' x 1½' ..	1,025
Total ..			3,26,794

ANNEXURE 29.

(i) Statement showing the names of Inspection Bungalows taken over during the year 1953-54.

(1) Tiruchirappalli Circle	Nil.
(2) Coimbatore Circle	Nil.

(ii) Statement showing the Inspection Bungalows maintained by the department during 1953-54.

Serial number and name of division. (1)	Class I. (2)	Class II. (3)	Class III. (4)	Rest-houses. (5)	Revenue realised. (6) RS.	Cost of maintenance. (7) RS.
1 Chingleput	..	..	..	..	..	..
2 South Arcot	..	..	..	..	..	..
3 Nagapattinam	..	..	..	..	..	..
4 Tanjore	..	1	..	..	578	3,261
5 Tiruchirappalli	1	..	..	..	50	..
6 Madurai	..	..	..	..	..	..
7 Ramanathapuram	..	..	..	..	..	..
8 Tirunelveli	..	..	..	..	..	..
9 North Arcot	1	..	..	..	189	519
10 Salem	..	..	..	..	..	..
11 Krishnagiri	..	..	..	..	..	..
12 Erode	..	2	..	..	1,275	1,021
13 Coimbatore	..	2	..	..	21	937
14 Palghat	1	6	..	..	528	3,050
15 Kozhikode	..	..	..	..	..	..
16 Mangalore	..	2	..	..	1,108	203
17 Ootacamund	..	..	..	..	..	..
Total ..	2	14	..	..	3,749	8,991

(iii) Statement showing the names of Travellers' Bungalows taken over during the year 1953-54.

(1) Tiruchirappalli Circle—
Ramanathapuram Division.—The Travellers' Bungalows at Kariapatty and Blocks II and III of Travellers Bungalow at Palayampatti were taken over to Government with reference Government Memorandum No. 14620 A/53-4. P.W., dated 26th June 1953. (C.E's. (H) End. No. 75069, L 4/52-HR., dated 15th June 1953).

(2) Coimbatore, Circle Nil.

(iv) Statement showing the Travellers' Bungalows maintained by the department during 1953-54.

Serial number and name of division. (1)	Class I. (2)	Class II. (3)	Class III. (4)	Rest house. (5)	Revenue realised. (6) RS.	Cost of maintenance. (7) RS.
1 Chingleput	2	2	..	2	813	6,426
2 South Arcot	2	6	..	5	3,835	11,987
3 Nagapattinam	..	1	4	..	739	4,115
4 Tanjore	..	2	..	8	720	6,297
5 Tiruchirappalli	..	2	9	8	2,561	8,541
6 Madurai	2	10	4	..	3,342	23,079
7 Ramanathapuram	7	7	..	..	4,908	5,751
8 Tirunelveli	..	9	..	6	2,191	12,970
9 North Arcot	..	3	..	..	110	1,031
10 Salem	..	8	..	1	6,187	6,165
11 Krishnagiri	1	11	..	2	8,762	8,762
12 Erode	3	5	8	..	3,692	12,501
13 Coimbatore	..	9	..	9	1,347	3,407
14 Palghat	..	22	..	5	10,593	3,455
15 Kozhikode	1	14	..	..	1,614	11,870
16 Mangalore	7	12	12	30	4,919	23,439
17 Ootacamund	..	..	..	..	..	..
Total ..	25	123	41	75	47,571	1,49,796

ANNEXURE 30.

Intensity statistics.

Serial number and name of district.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Area (square miles).	Miles of road.	Area per mile of road.	Population as per 1951 census.	Population per mile of road.	Number of vehicles.	Number of vehicles per mile of road.	Expenditure on roads.	Expenditure per mile of road.	Land revenue and cesses.	Revenue per mile
1 Chingleput ..	..	3,103	1,733	1.79	3,209,675	1,886	880	..	45,97,477	2,653	29,96,875	1,729
2 South Arcot ..	..	4,204	2,003	2.09	2,776,767	1,386	92,200	46	32,16,624	1,606	74,83,859	3,738
3 Tanjore, ..	..	3,740	2,813	1.33	2,982,670	1,060	129,352	46	41,55,849	1,477	1,20,17,474	4,272
4 Tiruchirappalli ..	..	5,514	2,544	2.16	2,943,882	1,157	61,947	20	36,92,829	1,452	64,42,827	2,533
5 Madurai ..	..	4,910	2,047	2.38	2,891,317	1,413	43,540	24	44,55,202	2,176	42,65,306	2,084
6 Ramanathapuram ..	..	4,849	1,400	3.46	2,080,519	1,486	37,455	27	41,99,548	2,909	9,40,589	672
7 Tirunelveli ..	..	4,343	1,546	2.82	2,445,967	1,592	7,457	5	38,53,454	2,492	37,42,872	2,421
8 North Arcot ..	..	4,654	1,642	2.83	2,859,157	1,741	48,532	30	24,78,699	1,509	42,74,965	2,604
9 Salem ..	..	7,051	2,524	2.79	3,871,789	1,337	106,088	42	39,56,830	1,668	39,87,672	1,580
10 Coimbatore ..	..	7,090	3,609	1.96	3,293,204	912	17,010	5	47,05,264	1,304	52,80,818	1,451
11 The Nilgiris ..	..	984	601	1.64	3,11,729	519	2,762	5	5,64,728	923	3,18,023	529
22 Malabar ..	..	8,344	1,998	2.92	4,758,342	2,882	48,772	24	44,09,450	2,257	63,73,225	3,190
13 South Kanara ..	..	4,044	1,467	2.75	1,748,991	1,192	1,720	1	37,20,047	2,543	35,09,469	2,597
14 Coleroon Bridge Division ..	..	..	..	..	..	..	..	..	1,53,573	..	..	..
15 Transport and Machinery Division.	..	..	..	..	..	..	..	..	9,79,716	..	..	..
Total ..	..	60,330	25,927	2.33	35,734,489	1,378	5,92,665	23	4,91,46,745	1,865	6,18,88,774	2,387

NOTE.—(1) The particulars in respect of columns (3) and (6) were adopted from the District Census Hand-Book, 1951.

(2) The reverse figures noted in column (12) are on the basis of information obtained from the Board of Revenue.

ANNEXURE 31.

Statement showing the numerical strength of employees in the department as on 31st March 1954.

Serial number and name of circle and division.	Number of employees in each category.					Plant operators.	Workshops.	Petty supervision.	Other work-charged establishments.	Total.
	Administrative.	Engineering.	Ministerial.	Last grade.	Menials paid from contingencies.					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Tiruchirappalli Circle.</i>										
Chingleput ..	..	41	47	33	12	54	..	165	590	942
South Arcot ..	..	29	56	36	13	46	1	167	567	915
Nagapatam ..	..	22	33	24	7	22	2	103	300	513
Tanjore ..	..	18	40	25	10	44	3	133	291	564
Tiruchirappalli ..	..	46	52	56	18	66	16	157	897	1,309
Madurai ..	..	40	48	37	8	86	6	160	650	1,035
Ramanathapuram ..	..	38	43	35	9	49	48	172	464	863
Tirunelveli ..	..	30	37	30	16	42	..	126	700	981
Coleroon Bridge Division ..	..	5	8	4	2	1	..	7	5	32
Transport and Machinery Division ..	..	17	23	10	2	84	151	..	..	287
Designs Division ..	..	10	5	6	..	..	..	..	..	21
Circle Office ..	..	1	8	19	3	..	..	..	..	39
Total ..	1	304	417	304	100	494	227	1,190	4,464	7,501
<i>Coimbatore Circle.</i>										
North Arcot ..	..	30	24	46	9	51	..	140	540	840
Salem ..	..	24	31	27	7	38	..	100	500	727
Krishnagiri ..	..	20	31	21	3	37	2	96	286	496
Erode ..	..	26	39	29	9	44	1	100	285	533
Coimbatore ..	..	32	27	29	9	40	33	97	377	644
Palghat ..	..	21	34	22	9	61	..	95	358	600
Kozhikode ..	..	27	29	24	9	38	1	90	300	518
Mangalore ..	..	36	37	33	7	49	..	126	368	656
Ootacamund ..	..	12	19	13	1	2	..	30	115	192
Circle Office ..	..	8	18	7	3	..	..	..	..	37
Total ..	1	236	289	251	66	360	37	874	3,129	5,243
Chief Engineer's Office ..	1	29	94*	21	..	..	..	..	..	146
Grand total ..	3	570	800	576	166	854	264	2,064	7,593	12,890

NOTE.—(1) ** Accounts Officer.
 (2) Figures in column (4) include all technical personnel from Divisional Engineers (Highways) down tracers.
 (3) Column (10) "Petty supervision" represents malstries.
 (4) Column (11) "Other work-charged establishments" are mainly gang coolies.

* This includes the accounts branch of this office also.

ANNEXURE 32.

District War Statistics for the year 1953-54.

Serial number and name of district.	ADMINISTRATION REPORT OF THE													
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Area,	Population as per 1951 census.	Number of vehicles.	Number of divisions.	Number of subdivisions.	Number of sections.	Number of villages less than 500 population.	Number of villages and towns more than 500 population.	Number of panchayats (major).	Number of municipalities.	Number of blocks under National extension service and Community Projects.	Length of Government roads as on 31st March 1954.	Length of district board roads as on 31st March 1954.	
	SQ. MILES.													
1 Chingleput ..	3,703	3,269,675	880	1	6	21	906	1,031	16	3	3	658	1,075	
2 South Arcot ..	4,204	2,776,767	92,200	1	7	24	560	1,702	14	4	4	560	1,443	
3 Tanjore ..	3,740	2,982,670	129,352	3	7	28	774	1,506	23	6	2	689	2,124	
4 Tiruchirappalli ..	5,514	2,943,882	51,947	1	6	24	334	1,179	23	4	3	774	1,770	
5 Madurai ..	4,910	2,891,817	48,540	1	6	27	242	860	20	6	4	618	1,399	
6 Ramanathapuram ..	4,849	2,080,519	37,455	1	6	23	1,854	966	26	7	2	486	914	
7 Tirunelveli ..	4,343	2,445,967	7,457	1	5	22	189	829	37	4	3	453	1,088	
8 North Arcot ..	4,651	2,859,157	48,532	1	5	17	397	1,430	14	8	2	656	986	
9 Salem ..	7,051	3,371,769	106,033	2	7	24	485	1,370	16	2	2	813	1,711	
10 Coimbatore ..	7,090	3,293,204	17,010	2	8	39	104	914	14	8	2	1,026	2,583	
11 Malabar ..	5,844	4,758,342	48,772	2	7	25	217	1,292	9	5	2	965	1,083	
12 South Kanara ..	4,044	1,748,991	1,720	1	8	20	24	618	6	2	2	689	773	
13 The Nilgiris ..	984	311,729	2,762	1	1	7	5	45	1	2	1	204	397	
14 Transport and machinery Division.	..	..	..	2	3	18	..	..	..	..	..	..	..	
15 Madras Designs Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total ..	60,330	35,734,489	592,665	20	82	319	6,043	14,742	219	59	32	8,626	17,301	

Serial number and name of district.	Total length of all roads.	Length of National Highways.	Length of Provincial Highways.	Length of Major district roads (Government, and district board).	Length of other district roads.	Length of village roads.	Revenue of the district.	Land-cases payable to district board.	Minimum allotment for Government roads.	Average rate per mile.	Minimum allotment for district roads.	Average rate per mile.	Minimum allotment for district roads.	Average rate per mile.
	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
1 Chingleput ..	1,733	138	..	531	279	733 + 7	29,95,875	4,68,105	23,30,456	1,346	..	..	..	..
2 South Arcot ..	2,003	86	90	672	499	648 + 8	74,83,859	11,69,353	19,55,492	976	..	..	..	..
3 Tanjore ..	2,813	..	101	951	648	1,105 + 8	1,20,17,474	18,77,750	28,78,423	1,023	..	..	..	..
4 Tiruchirappalli ..	2,544	130	190	691	546	987	64,42,827	10,06,692	13,04,431	513	..	..	..	..
5 Madurai ..	2,047	110	67	724 + 5	152	857 + 132	42,65,306	6,66,454	17,22,078	841	..	..	..	..
6 Ramanathapuram ..	1,400	95	71	563 + 22	302	323 + 24	9,40,889	1,46,936	15,69,698	1,121	..	..	..	..
7 Tirunelveli ..	1,546	85	97	754	129	423 + 58	37,42,872	5,22,324	11,63,219	752	..	..	..	..
8 North Arcot ..	1,642	104	73	602	462	401	42,74,965	6,67,963	16,32,846	995	..	..	..	..
9 Salem ..	2,524	203	62	955	701	603	39,87,672	6,23,074	17,25,072	683	..	..	..	..
10 Coimbatore ..	0,609	77	195	1,201	664	1,472	5,36,818	8,18,253	37,16,730	1,080	..	..	..	..
11 Malabar ..	1,998	42	385	818	397	406	63,73,225	9,95,816	42,87,613	2,146	..	..	..	..
12 South Kanara ..	1,467	..	266 + 8	595	233	405	38,09,469	5,95,230	14,56,352	998	..	..	..	..
13 The Nilgiris ..	601	..	104	92	82	323	3,18,023	49,691	5,90,191	982	..	..	..	..
14 Transport and machinery Division.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Madras Designs Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	25,927	1,065	1,659	9,109	5,144 + 237	8,086 + 237	6,18,88,774	96,70,121	2,63,33,606	1,016	..	..	..	..

NOTE.—(1) Figures in columns (2), (3), (8), (9), (10) and (11) were adopted from the District Census Hand-book, 1951 published by the Superintendent, Census Operations, Madras.
 (2) Revenue figures in column (21) were adopted from the particulars furnished by the Board of Revenue. The figure Rs. 6,18,88,774 does not include the revenue of Rs. 3,60,599 in respect of Madras District.
 (3) + Figures under columns (18) and 20 represent the roads newly formed during the year, the classification of which is not available.
 (4) The land-cases payable to the district boards was worked out at Rs. 0-2-6 per rupee on the amount of revenue realized in the districts.

ANNEXURE 33.
Districtwar Cost Index.

Maintenance.										
Serial number and name of division.	Government.				District Board.				Percentage. (+) or (-). (9)	
	Number of works let on contract. (2)	Total Estimate cost. (3)	Total contract value. (4)	Percentage (+) or (-). (5)	Number of works let on contract. (6)	Total Estimate cost. (7)	Total contract value. (8)			
(1)		RS.	RS.			RS.	RS.			
1 Chingleput	87	9,97,120	9,06,141	- 9'3	115	2,81,113	2,57,611	- 9'12		
2 South Arcot	78	6,20,673	5,59,815	- 9'8	305	7,68,045	6,83,975	- 10'95		
3 Tanjore	153	9,55,793	8,45,608	- 11'5	91	6,91,975	5,63,438	- 18'6		
4 Nagapattinam	77	10,03,710	9,42,807	- 5'3	242	3,71,468	3,27,052	- 11'7		
5 Tiruchirappalli	264	30,28,530	19,21,940	- 36	368	16,64,484	15,11,282	- 9		
6 Madurai	162	19,44,004	18,07,365	- 6	208	18,01,973	11,67,574	- 6		
7 Ramanathapuram	82	12,21,072	9,33,914	- 18	136	5,95,536	5,26,449	- 13		
8 Tirunelveli	100	11,16,671	9,95,781	- 10'9	216	7,42,840	7,03,190	- 5'4		
9 Coleroon	..	..	..	..	..	..	..	..		
10 Transport and Machinery	..	..	..	..	..	..	..	..		
Total	1,003	1,08,87,579	89,13,371	- 18'1	1,679	69,17,434	57,41,171	- 16'7		
11 North Arcot	301	13,01,209	12,04,749	- 7'4	238	3,50,444	2,45,739	- 29'88		
12 Salem	108	6,93,495	6,15,130	- 11'3	156	5,64,530	4,59,036	- 18'7		
13 Krishnagiri	108	7,97,889	7,77,606	- 2'5	101	2,98,705	2,53,878	- 15'1		
14 Erode	112	24,77,380	19,64,651	- 20'7	154	11,27,300	8,12,985	- 27'9		
15 Coimbatore	253	17,71,331	8,82,529	- 14	246	11,27,236	10,25,050	- 12		
16 Palghat	119	15,16,753	13,20,850	- 12'91	128	2,60,424	2,19,821	- 15'5		
17 Kozhikode	99	5,88,554	5,63,599	- 4'25	128	3,31,111	3,11,961	- 5'78		
18 Mangalore	122	18,85,552	19,36,752	+ 3	..	..	..	..		
19 Ootacamund	87	1,89,993	1,80,986	- 4'74	74	1,43,955	1,42,235	- 3'21		
Total	1,309	1,12,22,136	94,46,852	- 15'8	1,925	42,06,705	34,71,305	- 17'5		
Grand total	2,312	2,21,09,715	1,83,60,223	- 16'9	2,904	1,11,24,139	92,12,476	- 17'2		

NOTE.—(1) In respect of Mangalore Division complete particulars on district board side were not available. Hence they are shown as 'nil'.

(2) * The amount excludes the cost of cement and steel.