

32874

ADMINISTRATION REPORT
OF THE
HIGHWAYS DEPARTMENT
1954-55



R
341 211Y'N57 /
N57 ✓
32874

TABLE OF CONTENTS

	PAGES
SUMMARY—	
(1) Accomplishments	1-4
(2) Expenditure	2-3
(3) Upkeep	2-4
	95
ORGANIZATION—	
(1) The Administrative set-up	5
(2) The Chief Engineer and his office	5
(3) Superintending Engineers (Highways)	6-8
(4) Divisional Engineers (Highways)	9-11
(5) Subdivisions	11-15
(6) Junior Engineers and Supervisors	
WORKS—	
(1) General	15
(2) Maintenance	16-17
(3) Capital Works	17-33
RURAL DEVELOPMENT WORKS	34-35
INSPECTIONS—	
(a) Inspection of Division offices by Superintending Engineers (Highways)	36-37
(b) Inspection of Circle offices by Chief Engineer (Highways)	37
STATISTICS—	
(a) Tests, Experiments and Research	37-39
(b) Investigation of roads	39
(c) Investigation of bridges and culverts	39-40
(d) Costs of labour and materials	41
(e) Traffic Census	42
(f) Tools and Plant	42-44
(g) Contracts	45
(h) Claims and Disputes	45
(i) Accidents	46-47
(j) Floods and monsoon damages	47-49
(k) Avenues	49
(l) Ferries	50
(m) Inspection bungalows	50
(n) Travellers' bungalows	50
(o) Encroachments	50
(p) Works approved by Government under Post-war Road Development Scheme	50
(q) Work done in the offices of Superintending Engineers and Divisional Engineers	50
(r) Work done in the office of the Chief Engineer (Highways)	50
ACCOUNTS AND AUDIT	
COMMITTEES AND CONFERENCES—	
(a) The Board of Communications	51
(b) Central Annual Conference	51-52
(c) Monthly Conference	52-53
A.B.H.—A	

CHAPTER

IX. EVENTS—

Indian Roads Congress	..
A. Exhibition	..
B. Laying of foundation stones	..
C. Opening ceremony	..
Growth of roads in the State maintained by the Highways Department as on 31st March 1955	..
Total Annual Expenditure	..

APPENDICES

ANNEXURE

(1) (i) Statement showing mileage of and expenditure on extra-municipal roads maintained by Public authorities	..
(ii) Expenditure incurred on extra municipal roads maintained by the Public authorities during the year ending 31st March 1954	..
(iii) Sources of expenditure incurred on road works for the year ending 31st March 1954	..
(2) Statement showing the cost of maintenance of roads since 1946-47	..
(3) Classified cost of maintenance for the year 1954-55	..
(4) Statement showing the length of roads maintained during 1951-55 as on 31st March 1955	..
(5) Statement showing the various types of roads in the Madras State as on 31st March 1955	..
(6) Statement showing the lengths of various classes of roads improved or newly formed during 1954-55	..
(7) Statement showing the length of roads taken over from the district boards, etc., during 1954-55	..
(8) Roads mileage analysis as on 31st March 1955—Government and District Board roads	..
(9) Statement showing in abstract Appropriation and Expenditure during 1954-55 under all heads of Civil Works (Highways only)	..
(10) Statement showing Appropriation and the Outlay during 1954-55 (Highways only)	..
(11) (i) Statement showing the Divisionwise particulars of expenditure on Government roads (State and Union), 1954-55	..
(ii) Statement showing the Divisionwise particulars of expenditure on District Board roads and non-road works, 1954-55	..
(iii) Statement showing the Progress achieved on Post-war Road Development works—Roads other than National Highways during the year 1954-55	..
(12) Statement showing the figures under "XXXIX. Civil Works—Rents and Miscellaneous, 1954-55—Highways only"	..
(13) Statement of expenditure on roads classified according to categories of roads	..
(i) Statement of expenditure incurred on each category of roads under Government and District Boards	..
(ii) Statement showing Divisionwise expenditure and lapses of grant on Government roads	..
(iii) Statement showing Divisionwise lapses of grant on District Board roads	..
(14) Financial statement of all disbursements	..
(15) Statement showing the works approved by Government under Post-war Road Development Programme	..
(16) (i) Statement showing the technical sanctions to estimates during 1954-55—Government works	..
(ii) Statement showing the technical sanctions to estimates during 1954-55—District Board works	..

APPENDICES—cont.

PAGES

(iii) Statement showing the technical sanctions to estimates during 1954-55 for panchayat works accorded by the Divisional Superintending Engineers (Highways)	93
(17) Statement showing the number of tender cases approved by the Superintending Engineers (Highways) and Divisional Engineers (Highways) during 1954-55	94
(18) (i) Statement showing the number of agreements accepted by the Superintending Engineers and Divisional Engineers for Government works	95
(ii) Statement showing the number of agreements accepted by the Superintending Engineers and Divisional Engineers for District Board works	95-96
(19) Work done in the office of the Chief Engineer (Highways)	96-99
(20) (i) Statement showing the contracts awarded since 1946-47	100
(ii) Statement showing the contracts awarded during 1954-55	101
(21) (i) Statement showing the number of investigations since 1946-47	102
(ii) Statement showing the number of investigations in 1954-55	102
(22) (i) Review of works costing over Rs. 1 lakh each in progress during 1954-55	103-106
(ii) Review of works costing over Rs. 1 lakh completed during the year 1954-55	107
(23) (i) Review of works costing less than Rs. 1 lakh each in progress during 1954-55	108-111
(ii) Review of works costing less than Rs. 1 lakh each completed during 1954-55	112-116
(24) (i) Statement showing the quantities of materials used, etc.—Government roads	117
(ii) Statement showing the quantities of materials used, etc.—District Board roads	117
(25) Inventory of plant and machinery as on 31st March 1955	118-119
(26) Statement of avenues	120-121
(27) (i) Statement showing the particulars of encroachments detected and disposed of during the year 1954-55—Government roads	122
(ii) Statement showing the particulars of encroachments detected and disposed of during the year 1954-55—District Board roads	123
(28) Statement of ferries maintained by the department	124
(29) (i) Statement showing the names of inspection bungalows taken over during the year 1954-55	125
(ii) Statement showing the names of inspection bungalows maintained by the department during 1954-55	125
(iii) Statement showing the names of travellers' bungalows taken over during the year 1954-55	125
(iv) Statement showing the names of travellers' bungalows maintained by the department during the year 1954-55	125
(30) Intensity statistics	126
(31) Statement showing the numerical strength of employees in the department as on 31st March 1955	127
(32) Districtwar statistics for the year 1954-55	128-129
(33) Districtwar cost index	130-131

ADMINISTRATION REPORT OF THE HIGHWAYS DEPARTMENT, 1954-55.

CHAPTER I.

SUMMARY.

1. *Accomplishments.*—The Highways Department continued to be in charge of National Highways, State Roads, and the District Board Roads in State, and has been executing all works connected with the maintenance of these roads and the development of the roads in general, the expenditure in respect of works on National Highways having been met by the Government of India. During the year under review, this Department pursued its policy of forming more and more new roads and extending the mileage of improved surfacings. Thus the isolated rural areas were brought within the net work of the road system of the State and several stretches of roads running through built up areas or subjected to heavy traffic were provided with appropriate types of improved surfacings such as cement concrete, bituminous concrete and bituminous macadam.

Roads in the State are divided into groups coming under different authorities—the Union Government for National Highways, the State Government for State Highways and majority of Major District Roads, the District Boards for other District Roads, village roads and the balance of Major District Roads. All along the policy of the department has been that all National Highways, State Highways and Major District Roads be taken over by Government from the local bodies in order to relieve them of the responsibility of maintaining these classes of roads and to enable them to concentrate their resources on roads of local importance. In pursuance thereof, a length of about 48 miles of roads were taken over by Government during the year, bringing up the total mileage of Government roads to 8,672 miles. The details of roads taken over during the year are given in Annexure 7.

The details given below showing the figures of total expenditure incurred on all Government and District Board works indicates the increasing volume of works carried out by this department in the past and during the year under review :—

Year.				Expenditure on Government roads and District Board roads and non-road works.	
				RS.	
				IN LAKHS.	
1946-47	..	..	..	375	} Expenditure under composite State of Madras.
1947-48	..	..	..	437	
1948-49	..	..	..	627	
1949-50	..	..	..	751	
1950-51	..	..	..	808	
1951-52	..	..	..	881	} Residuary Madras State.
1952-53	..	..	..	987	
1953-54	..	..	..	487	
1954-55	..	..	..	449	

A brief summary of accomplishments of the department in 1954-55 is rendered below :—

Government Roads.—Seven hundred and sixty-three miles of roads were blacktopped and seventy-six bridges, culverts and causeways were constructed. Besides, special repairs to the extent of Rs. 1.70 lakhs were carried out covering 20 works.

District Board Roads.—Eighty-five miles of roads were black-topped, 267 miles of new roads were formed and 37 bridges, culverts and causeways were constructed. In addition, special repairs to the tune of Rs. 6.16 lakhs were carried out covering 43 works.

Divisionwise details of works completed during the year are given in Annexures 22 (ii) and 23 (ii) and those in respect of roads newly formed or provided with 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 1954-55 in respect of Government and District Board works and a comparison with previous years' figures are given in the following statement :—

Nature of works.	STATEMENT.					
	Final grant for 1954-55.	Expenditure in 1954-55.			Expenditure in 1953-54.	
		Amount.	Percentage or final expenditure to the final grant.	Amount.	Percentage of final expenditure to the final grant.	Amount.
	RS.	RS.	RS.	RS.	RS.	RS.
	IN LAKHS.	IN LAKHS.	IN LAKHS.	IN LAKHS.	IN LAKHS.	IN LAKHS.
Government roads—						
Capital works including Development Schemes	66.47	65.05	98.32	65.48	92.91	
Maintenance ..	236.43	242.75	102.67	265.53	134.16	
Total, Government works	302.90	307.80	101.71	331.01	123.32	
District Board Works—						
Capital works on roads including Development Schemes	48.83	41.96	85.93	42.83	76.31	
Maintenance ..	86.09	77.91	90.49	84.67	88.15	
Non-road works ..	21.21	20.98	98.91	26.57	79.98	
Total, District Board works.	156.13	140.85	90.21	156.07	83.06	
Grand total ..	459.03	448.75	97.80	487.08	106.64	

The expenditure during the year on Government and District Board works classified under different categories of roads is as follows :—

	Expenditure in rupees.	
	New construction.	Maintenance.
	RS.	RS.
Government roads—		
National Highways ..	28,00,568	41,79,671
State Highways ..	13,00,024	50,89,480
Major District Roads ..	24,03,828	1,43,71,322
Other District Roads ..	824	1,80,725
Maintenance of avenues ..	..	4,53,685
Total ..	65,05,244	2,42,74,883

	Expenditure in rupees.	
	New construction.	Maintenance.
	RS.	RS.
District Board Roads—		
Major District Roads ..	10,83,310	31,98,793
Other District Roads ..	10,29,818	23,54,814
Village Roads ..	20,83,273	21,24,637
Maintenance of avenues ..	..	1,12,886
Total ..	41,96,401	77,91,130

The following statement shows the cost of establishment as percentage of the expenditure on works during the year 1954-55 with corresponding figures for the previous year for comparison :—

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 ..	478.60	46.64	9.7
1948-49 ..	666.05	53.49	8.0
1949-50 ..	824.66	58.90	7.1
1950-51 ..	958.85	61.63	6.4
1951-52 ..	965.69	62.89	6.5
1952-53 ..	1,066.27	63.35	5.9
1953-54 ..	517.91	34.88	6.7
1954-55 ..	469.81	40.02	8.5

Out of the total establishment charges of Rs. 40,02,951 a sum of Rs. 5,30,414 was recoverable from the Union Government towards the charges for works executed by the Department on National Highways and a sum of Rs. 9,75,475 was provisionally marked for being recovered from the District Boards in proportion to the expenditure incurred on District Board works. Thus the net charge on the State on account of establishment was only Rs. 24,97,062.

3. **Upkeep.**—A general review concerning the upkeep of Government and District Board roads in the State is given below :—

Government Roads.—During the year, the maintenance allotment sanctioned by Government was quite inadequate when compared with the minimum allotment required for proper maintenance of roads. Nevertheless, the roads were maintained as satisfactorily as possible with the available funds.

District Board Roads.—The slender financial position of the District Boards was seriously telling upon the proper maintenance of roads in their charge. During the year under report the District Boards were able to allot funds to the extent of Rs. 86.09 lakhs against the estimated minimum requirement of about Rs. 150 lakhs. In spite of this, the Department was doing its best to maintain the roads in a satisfactory condition by a judicious distribution of available funds.

With the construction of more and more new roads every year, the need for maintenance by District Boards is bound to increase and it adds to the existing strain on their financial resources. Expanding means of communications under District Boards without earmarking necessary funds to maintain them and leaving them to their fate, requires speedy remedy. Government are having, under their active consideration, the question of taking

over all Major District Roads in charge of the District Boards. When the proposal materialises, it may be possible for the District Boards to provide funds for the construction of roads of local importance and also to maintain them in a satisfactory condition.

Some facts concerning upkeep.—The standard of maintenance of various categories of roads, viz., National Highways, State Highways, Major District Roads and other District Roads, was generally good with due reference to the allotment made available and with regard to adverse seasonal conditions obtaining in certain divisions.

With the advent of steady increase in the number of modern fast moving vehicles and heavy trucks, there has been growing demand for improved surfacings. Apart from this, the water bound macadam surface has been found to deteriorate rapidly under such fast and heavy traffic. Consequently, in order to raise the utility of the roads and to bring down the annual cost of maintenance to the minimum possible, surface dressing with pre-coated chips was extensively taken up during the year under maintenance grant.

Malabar and South Kanara districts, call for special attention due to their extra heavy monsoonic conditions. Enhancement of maintenance allotment is an imperative need for taking up black-top works on a large scale in these areas.

CHAPTER II.

ORGANIZATION.

1. Administrative set up.

1. General.—The department continued to function with one permanent Chief Engineer in its charge. There were two circles and twenty divisions as per the set up fixed after the formation of the Andhra State till 17th October 1954 afternoon. On 18th October 1954 forenoon another circle was formed at Cannanore to carry out the West Coast Roads Scheme. Three special divisions were formed to attend to the investigation and preparation of plans and estimates for bridge and road works in Malabar and South Kanara districts. A post of Director of Research Station was created for preparing plans and estimates for the construction of a Highways Research Station and a special division formed for the construction of a bridge across Ponnar near Villupuram. A special division functioned for two months to attend to border works around the then French possession in South Arcot district.

In G.Os. No. 3927, Public Works, dated 29th September 1953, and No. 187, Public Works, dated 20th January 1955, Government fixed the permanent strength of the various categories as follows :—

Name of post.	Permanent strength.
Chief Engineer	1
Superintending Engineers	2
Divisional Engineers	14
Assistant Engineers	53
Supervisors/Junior Engineers	261
Mechanical Supervisor	1

2. Chief Engineer (Highways) and his office.

Chief Engineer (Highways).

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) throughout the year.

Deputy Chief Engineer (Highways)

Sri K. Ramaswamy Reddy, B.E., A.M.A.M.SOC.C.E., M.I.H.E., from 1st April 1954 to 14th April 1954 afternoon.

Sri T. S. Kethara Mudaliar, C.E., from 14th April 1954 afternoon to 31st March 1955 afternoon.

Accounts Officer.

Sri V. S. Ramachandran, B.A., continued as Accounts Officer throughout the year.

Engineer Liaison Officer.

Sri T. M. Trehan from 1st April 1954 to 16th May 1954 afternoon. Vacant from 17th May 1954 to 31st March 1955.

Technical Assistants to the Chief Engineer (Highways).

Sri R. L. Sreshta, B.E., continued throughout the year.

Sri C. V. Padmanabhan, B.Sc., B.E., continued throughout the year.

Sri E. P. Nataraja Ayyar continued throughout the year.

Sri S. Sundaram, B.E., from 9th August 1954 afternoon to 17th January 1955 afternoon. Sri P. R. Nagabushanam, B.E., succeeded him on 5th March 1955 forenoon and continued up to 31st March 1955 afternoon.

Sri T. Kumaraswamy, B.E., from 17th November 1954 forenoon to 31st March 1955 afternoon.

3. Superintending Engineers.

Tiruchirappalli Circle.

Sri M. Narayana Kamath, B.E., C.E. (Hons.), M.A.M. SOC. C.E., M.I.E. (Ind.), 1st April 1954 forenoon to 14th October 1954 afternoon.

Sri M. Balasubramanyam, B.E., Divisional Engineer (Highways), in charge from 14th October 1954 afternoon to 23rd October 1954 afternoon.

Sri G. S. Ganapathy, 23rd October 1954 afternoon to 6th December 1954 afternoon.

Sri S. C. Nayak, M.I.E. (Ind.), 6th December 1954 afternoon to 31st March 1955.

Coimbatore Circle.

Sri S. C. Nayak, M.I.E. (Ind.), 1st April 1954 forenoon to 15th October 1954 afternoon. Shifted to Madras with effect from 16th October 1954 afternoon.

Sri G. S. Gnanaprakasam, B.E., 16th October 1954 forenoon to 31st March 1955.

West Coast Circle, Cannanore.

Formed on 18th October 1954 forenoon. Sri M. Narayana Kamath, B.E., C.E. (Hons.), M.A.M. SOC. C.E., M.I.E. (Ind.), 18th October 1954 forenoon to 31st March 1955.

4. Divisional Engineers.

(1) Chingleput Division.

Sri G. S. Gnanaprakasam, B.E., 1st April 1954 forenoon to 15th October 1954 afternoon.

Sri V. Subramaniya Mudaliar, B.E., Assistant Engineer (Highways), in charge, 16th October 1954 forenoon to 28th October 1954 afternoon.

Sri S. R. Naidu, B.E., from 28th October 1954 afternoon to 31st March 1955.

(2) North Arcot Division.

Sri S. R. Naidu, B.E., 1st April 1954 to 11th June 1954 forenoon.

Sri A. Muthukumaraswamy, B.E., 11th June 1954 forenoon to 10th July 1954 afternoon.

Sri S. R. Naidu, B.E., 10th July 1954 afternoon to 23rd October 1954 afternoon.

Sri W. G. S. Saldanha, B.E., 23rd October 1954 afternoon to 31st March 1955.

(3) South Arcot Division.

Sri A. R. Sivaswamy Ayyar, B.E., 1st April 1954 to 5th July 1954 forenoon.

Sri P. S. Sivaprakasam (additional charge), 5th July 1954 forenoon to 12th July 1954 afternoon.

Sri A. Muthukumaraswamy, B.E., 12th July 1954 forenoon to 26th August 1954 afternoon.

Sri P. S. Sivaprakasam, B.E., 26th August 1954 afternoon to 31st March 1955.

(4) Salem Division.

Sri O. Sivasankara Mudaliar, B.E., 1st April 1954 to 31st March 1955.

(5) Krishnagiri Division.

Sri C. N. Thirupuvanam, 1st April 1954 to 19th April 1954 forenoon.

Sri O. Sivasankara Mudaliar (Additional Charge), 20th April 1954 afternoon to 9th June 1954 afternoon.

Sri R. Bhuvaramurthy, B.E., 9th June 1954 afternoon to 31st March 1955.

(6) Tiruchirappalli Division.

Sri M. Balasubramanyam, B.E., 1st April 1954 to 31st March 1955.

(7) Nagapattinam Division.

Sri T. M. Veeraraghavan, B.E., A.M.I.E., Chartered Engineer, 1st April 1954 to 31st March 1955.

(8) Tanjore Division.

Sri H. Nataraja Sastrigal, B.E., 1st April 1954 to 30th July 1954 afternoon.

Sri T. M. Veeraraghavan, B.E., A.M.I.E., Chartered Engineer, Additional Charge, 30th July 1954 afternoon to 28th August 1954 afternoon.

Sri H. Nataraja Sastrigal, B.E., 28th August 1954 afternoon to 31st March 1955 forenoon.

(9) Tirunelveli Division.

Sri P. S. Sivaprakasam, B.E., 1st April 1954 to 22nd May 1954 forenoon.

Sri K. S. Devarajan, B.E., 22nd May 1954 forenoon to 31st March 1955.

(10) Ramanathapuram Division.

Sri P. Sirajuddin, B.E., 1st April 1954 forenoon to 24th July 1954 afternoon.

Sri S. Pichaimuthu, A.E., in charge, 24th July 1954 afternoon to 7th August 1954 afternoon.

Sri P. Sirajuddin, B.E., 7th August 1954 afternoon to 31st March 1955.

(11) Mathurai Division.

Sri T. S. Kethara Mudaliar, C.E., 1st April 1954 to 7th April 1954 afternoon.

Sri C. R. Munuswamy Naidu, C.E., 7th April 1954 afternoon to 31st March 1955.

(12) Erode Division.

Sri K. S. Krishnan, B.E., 1st April 1954 forenoon to 31st March 1955.

(13) Coimbatore Division.

Sri G. S. Ganapathy, C.E., 1st April 1954 forenoon to 23rd October 1954 forenoon.

Sri D. Sundararajan, Assistant Engineer (Highways) in charge, 23rd October 1954 forenoon to 28th October 1954 forenoon.

Sri M. S. Lawrence, B.A., A.M.I.E., 28th October 1954 forenoon to 10th December 1954 afternoon.

Sri G. S. Ganapathy, C.E., 10th December 1954 afternoon to 31st March 1955.

(14) The Nilgiris Division.

Sri N. J. John, C.E., 1st April 1954 to 19th August 1954 forenoon.

Sri S. Kalyanaraman, C.E., 19th August 1954 forenoon to 31st March 1955.

(15) Kozhikode Division.

Sri M. U. Samitha, C.E., 1st April 1954 to 20th September 1954 forenoon.

Sri M. K. Prabhu, Assistant Engineer (Highways) in charge, 20th September 1954 forenoon to 4th October 1954 afternoon.

Sri M. U. Samitha, C.E., 4th October 1954 afternoon to 15th January 1955 afternoon.

Sri M. K. Prabhu, Assistant Engineer (Highways), in charge, 15th January 1955 afternoon to 25th January 1955 forenoon.

Sri S. Sundaram, B.E., 25th January 1955 forenoon to 31st March 1955.

(16) Palghat Division.

Sri M. Kumaran, C.E., 1st April 1954 forenoon to 31st March 1955.

(17) South Kanara Division.

Sri M. Sreekanta Srouty, B.E., 1st April 1954 to 4th September 1954 forenoon.

Sri A. Muthukamaraswamy, B.E., 4th September 1954 forenoon to 31st March 1955.

(18) Transport and Machinery Division.

Sri K. Namasivayam, B.E., 1st April 1954 to 31st March 1955.

(19) Designs Division, Madras.

Sri P. R. Golikere, B.E., 1st April 1954 to 31st March 1955.

(20) Coleroon Bridge Division, Sirkali.

Sri S. Kalyanaraman, C.E., 1st April 1954 to 31st May 1954 afternoon.

Sri T. M. Veeraraghavan, B.E. (Additional charge), 31st May 1954 to 12th June 1954 afternoon.

Sri P. G. Nambiar, B.E., 12th June 1954 forenoon to 31st March 1955.

(21) Director of Research Station.

Formed on 14th April 1954 afternoon.

Sri K. Ramaswamy Reddi, B.E., A.M. A.M.SOC., C.E., 14th April 1954 afternoon to 31st March 1955.

(22) Special Division for Investigation, Preparation of Plans and Estimates for West Coast Road.

South Kanara district, Mangalore.

Sri M. A. Thirunavukkarasu, B.A., C.E., 30th April 1954 afternoon to 31st March 1955.

(23) Special Division for Investigation, Preparation of Plans and Estimates for West Coast Road.

Malabar district, Kozhikode.

Sri V. Govindaswamy Pillai, B.E., 7th May 1954 forenoon to 31st March 1955.

(24) Special Division for Investigation of Bridges, Mangalore.

Sri T. S. Narayanaswamy, B.E., 28th August 1954 forenoon to 31st March 1955.

(25) Special Division for Ponnar Bridge Division, Villupuram.

Sri N. J. John, C.E., A.M.I.E., 24th November 1954 forenoon to 31st March 1955.

5. Subdivisions.

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

Serial number and name of work. (1)	Headquarters. (2)	Date of formation. (3)	Date of closing. (4)
1 Forming a road from Ramanathapuram to Mandapam.	Ramanathapuram	7th February 1950, f.n.	16th August 1954, a.n.
2 Constructing a bridge across the Swarnanadhi near Puttige in South Kanara district.	Udipi	19th April 1951, f.n.	4th June 1954, f.n.
3 Constructing a bridge across Gatara at M. 2/3 of Alangulam Ambasamudram road in Tiruvelveli district.	Ambasamudram.	9th August 1951, f.n.	21st July 1954, a.n.

Serial number and name of work. (1)	Headquarters. (2)	Date of formation. (3)	Date of closing. (4)
4 Certain bridge works in Wynad.	Sultan's Battery.	29th December 1952, f.n.	31st December 1954, a.n.
5 C.R.F. Works	Sivaganga	24th October 1953, f.n.	31st March 1955.
6 Formation of a road in Kolli hills area. Realignment and re-investigation.	Namakkal	19th November 1953, a.n.	19th May 1954, a.n.
7 Investigation of Mannar Ghat to Chinathadagam.	Coimbatore	30th November 1953, f.n.	31st May 1954, a.n.
8 Constructing a causeway across Agniar river at M. 6/4 and 5 of Pattukottai-Arantangi road.	Pattukottai	6th March 1954, f.n.	6th September 1954, a.n.
9 Reconstructing the bridge at M. 1/1 of Merkanam-Tindivanam road.	Merkanam	15th March 1954, f.n.	31st March 1955, a.n.

The special subdivisions mentioned below were formed during the year under report :—

Serial number and name of the work. (1)	Headquarters. (2)	Date of formation. (3)	Remarks. (4)
1 Bypass road at Mahe	Tellicherry	1st Apr. 1954, f.n.	Closed on 1st June 1954, f.n.
2 Investigation and preparation of plans and estimates.	Kozhikode	5th May 1954, f.n.	....
3 Nileswhar bridge works in South Kanara.	Ho-dug	11th May 1954, a.n.	....
4 Investigation and preparation of plans and estimates.	Coondapur	10th May 1954, a.n.	....
5 Investigation and preparation of plans and estimates.	Cannanore	13th May 1954, a.n.	....
6 Investigation and preparation of plans and estimates.	Kasargod	19th May 1954, a.n.	....
7 Coleroon Bridge Works	Vallampadugai	22nd May 1954, a.n.	....
8 Constructing a causeway across river Ponnar near Melpat'ambakkam in South Arcot district.	Melapattam akkam.	24th May 1954, f.n.	....
9 Constructing a sumersi le bridge across Tambaraparni river at Mukani.	Athur	28th May 1954, f.n.	....
10 Investigation and preparation of plans and estimates.	Mangalore	4th June 1954, f.n.	....
11 Do.	Kozhikode	7th June 1954, f.n.	....
12 Perumbai bridge works in Malabar.	Payyanur	15th June 1954, a.n.	....
13 Security measure works	Villupuram	2nd July 1954, f.n.	Closed on 31st July 1954, a.n.
14 Do.	Cuddalore	3rd July 1954, f.n.	Closed on 25th August 1954, a.n.
15 Community Project Works.	Karkal	9th August 1954, f.n.	....
16 Cement concreting Tanjore-Tiruchirappalli road.	Tiruchirappalli	16th August 1954, f.n.	....

Serial number and name of the work. (1)	Headquarters. (2)	Date of formation. (3)	Remarks. (4)
17 Investigation work of bridge over Panniar at Cuddalore-Chittoor road.	Tirukoilur ..	23rd August 1954, f.n.	Closed on 16th February 1955, a.n.
18 Investigation work of forming a road from Bodinayakanur to Bodimettur.	Bodinayakanur ..	25th August 1954, f.n.	Closed on 24th February 1955, a.n.
19 Investigation work of forming a road from Kunnamangalam to Manjeri.	Kozhikode ..	6th September 1954, f.n.	Closed on 31st March 1955, a.n.
20 Community Works. Project	Mangalore ..	28th August 1954, f.n.	....
21 Do.	Erode ..	20th September 1954, f.n.	....
22 Repairs and improvements to roads around Madras City.	Madras ..	7th October 1954, f.n.	Closed on 31st January 1955, a.n.
23 Local Development Works and local works under National Extension Service Scheme.	Tiruvavur ..	21st October 1954, a.n.	....
24 Do	Tiruchirappalli.	24th October 1954, a.n.	....
25 Do.	Palayamkottai.	22nd October 1954, f.n.	....
26 Do.	Saidapet..	29th October 1954, a.n.	....
27 Do.	Cuddalore ..	3rd November 1954, f.n.	....
28 Do.	Coimbatore ..	3rd November 1954, f.n.	....
29 Do.	Kozhikode ..	5th November 1954, f.n.	....
30 Do.	Salem ..	5th November 1954, f.n.	....
31 Do.	Sivaganga ..	23rd October 1954, f.n.	....
32 Do.	Madurai ..	8th November 1954, a.n.	....
33 Do.	Vellore ..	9th November 1954, a.n.	....
34 Reconstructing a bridge at M. 15/3 of Cuddalore-Vridhachalam road.	Kurinipadi ..	9th November 1954, f.n.	....
35 Constructing a bridge across Karamanian at Manapad.	Kulasekhara-patnam.	9th November 1954, f.n.	....
36 Reconstructing Belthangady bridge at M. 37/3 of Mangalore-Mysore road.	Belthangady ..	8th November 1954, f.n.	....
37 Bridge work at M. 27/5 of Tirumushi-Satyavedu road (Chingleput district).	Trivallur ..	13th November 1954, f.n.	....
38 Periyar Project Area ..	Madurai ..	15th November 1954, a.n.	....
39 Congress Exhibition works.	Madras ..	29th November 1954, a.n.	Closed on 15th March 1955, a.n.

Serial number and name of work. (1)	Headquarters. (2)	Date of formation. (3)	Remarks. (4)
40 Forming a road to Jalarpet - Yellagiri Hills.	..	11th December 1954, f.n.	....
41 Local Development Works and local works under National Extension Service.	Mangalore ..	10th December 1954, f.n.	....
42 Constructing a bridge across Ponnai river at M. 104/2-5 of Madras Tiruchirappalli-Dindigul road.	Villupuram ..	15th December 1954, f.n.	....
43 Certain bridge works ..	Mangalore ..	23rd December 1954, f.n.	....
44 Community Projects ..	Palghat ..	29th December 1954, f.n.	....

6. Junior Engineers and Supervisors.

The category of Junior Engineers and Supervisors in the Madras Highways Engineering Subordinate Service was borne on State basis.

2. The staff position in regard to the availability of technically qualified personnel considerably improved. Only the passed B.Es. were appointed as temporary Junior Engineers in this Department during the year. No retired supervisors were re-employed. As in previous years, common staff attended to both Government and District Board works. All the Junior Engineers and Supervisors who were working in the Andhra State as transferred officers were reverted to the Residuary State during this year. Twelve supervisors spared from the Highways Department for appointment under Panchayat were continued during this year also.

3. Government took up an intensive programme of the National Extension Service, Community Projects and Development Works for intensive rural reconstruction works in the Madras State. The services of about 80 Junior Engineers and Supervisors of this Department were spared for the above scheme during this year as shown below :—

(i) National Extension Service Schemes	38	Junior Engineers and Supervisors.
(ii) Community Project Schemes	15	Do.
(iii) Local Development Works	27	Do.

Responsibilities of the Department in the execution of the above schemes considerably increased.

4. For the first time after the formation of this Department, the Madras Public Service Commission selected 100 candidates during the year under report for regular appointment as Supervisors (including Junior Engineers) in the Madras Highways Engineering Subordinate Service. Out of the 100 posts seven were filled up by overaged emergency Supervisors of this Department. These seven posts were specially reserved for them.

With a view to providing regular appointments as Supervisors in the Madras Highways Engineering Subordinate Service to the emergency L.C.E. Supervisors also, the Madras Public Service Commission interviewed all such Supervisors in this Department and selected nine candidates.

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)
Madurai Division ..	Special District Board building works.	7th October 1953, <i>a.n.</i>	4th June 1954.
Ramanathapuram Division I.	Ramanathapuram-Manmadurai road soil stabilization work.	25th September 1952, <i>a.n.</i>	16th August 1954, <i>a.n.</i>
Ramanathapuram Division II.	Do.	13th May 1953, <i>f.n.</i>	Do.
Do.	Famine relief works, C.R.F. ..	29th November 1953, <i>f.n.</i>	31st March 1955, <i>a.n.</i>
Ramanathapuram Division III.	Famine relief works, Kamuthi.	2nd December 1953, <i>f.n.</i>	Do.
Ramanathapuram Division IV.	Famine relief works, Sivakasi.	8th February 1954, <i>f.n.</i>	Do.
Tirunelveli Division ..	Gatana bridge work, Ambasamudram.	23rd December 1952, <i>f.n.</i>	31st July 1954, <i>a.n.</i>
Do.	District Board Famine works, Sankarankoil.	24th July 1953, <i>a.n.</i>	7th April 1954, <i>f.n.</i>
Do.	Low scale test work, Sankarankoil.	14th September 1953, <i>f.n.</i>	12th August 1954.
South Arcot Division ..	Special bridge work at M. 1/1 of Merkanam-Tidivanam road.	5th August 1953, <i>f.n.</i>	31st January 1955, <i>a.n.</i>
Tanjore district ..	Kattumannargudi (Vethivaikal bridge work). (G.O. No. 2186, P.W., dated 21st June 1954.)	....	1st October 1954, <i>f.n.</i>
Chingleput Division ..	Special Section, Avadi ..	9th October 1954, <i>a.n.</i>	31st January 1955, <i>a.n.</i>
Do.	Special Section, Poonamallee.	7th October 1954, <i>f.n.</i>	31st January 1955.
Do.	Special Section, Ambattur ..	13th October 1954, <i>f.n.</i>	30th December 1954.
South Arcot Division.	Special Vanur ..	5th July 1954, <i>a.n.</i>	25th August 1954, <i>a.n.</i>
Do.	Kandamangalam ..	6th July 1954, <i>f.n.</i>	Do.
Do.	Cuddalore Special Section ..	Do.	25th August 1954.
Do.	Valudavoor (Cuddalore Special).	8th July 1954, <i>f.n.</i>	31st July 1954, <i>f.n.</i>
Do.	Villupuram (Cuddalore Special).	7th July 1954, <i>a.n.</i>	31st July 1954, <i>a.n.</i>
Chingleput Division I ..	Congress Exhibition ..	14th December 1954, <i>f.n.</i>	15th March 1955, <i>a.n.</i>
Chingleput Division II.	Do.	6th December 1954, <i>f.n.</i>	Do.
Chingleput Division, Madras III.	Do.	7th December 1954, <i>f.n.</i>	Do.
Chingleput Division, Madras IV.	Do.	16th December 1954, <i>f.n.</i>	Do.
Nilgiris Division ..	Ootacamund subdivision—Quarry Section.	16th November 1953.	25th May 1954, <i>a.n.</i>
South Kanara Division.	Hosmata, Uppinangady bridge works.	25th August 1953, <i>f.n.</i>	6th June 1954, <i>a.n.</i>

Name of division. (1)	Name of work. (2)	Date of formation. (3)	Date of closing. (4)
Salem South Division ..	Namakkal-Pavitrani road ..	24th April 1953, <i>f.n.</i>	23rd April 1954, <i>f.n.</i>
Do.	Kolli Hills subdivision ..	24th December 1953.	19th May 1954, <i>f.n.</i>
Do.	Special Investigation ..	15th January 1955, <i>f.n.</i>	31st March 1955, <i>f.n.</i>
South Kanara ..	Sankaranarayana ..	2nd June 1954.	8th June 1954, <i>f.n.</i>
Do.	Surathal Section ..	21st August 1954.	3rd January 1955.
Coimbatore Division ..	Formation of road from Mannarghat to Chinna-thadagam.	....	31st May 1954, <i>f.n.</i>
South Kanara Division.	Baindur Special Section ..	....	2nd July 1954.
Malabar district ..	Special Section, Mahe ..	....	15th May 1954.
Do.	Do. ..	....	31st May 1954.
Kozhikode Division ..	Special investigation work ..	....	31st March 1955.
Mangalore Division ..	Investigation Barba-Subramaniam road.	....	5th March 1955.
Do.	Special Bridges Investigation.	....	31st October 1954.
South Kanara Division.	Surakkal ..	....	2nd January 1955.
Chingleput Division ..	II Soil Research Station ..	....	5th August 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)
Tiruchirapalli ..	Cement Concrete Works ..	25th September 1954, <i>f.n.</i>
Madurai ..	Famine Relief Works ..	....
Do.	Dindigul ..	16th April 1954, <i>f.n.</i>
Do.	Forming road from Bodi to Bodi-Mettur.	20th September 1954, <i>f.n.</i>
Ramanathapuram ..	Special Section Bridge work at M. 66/6 of Madurai-Ramanathapuram road.	10th August 1954, <i>f.n.</i>
Do.	C.R.F. Works, Kamuthi ..	19th November 1954, <i>f.n.</i>
Salem Division ..	Bridge work Mukkani-Athoor ..	9th August 1954, <i>f.n.</i>
South Arcot Division ..	Melpattambakkam-Ponnai bridge work, Villupuram.	19th May 1954, <i>f.n.</i>
Do.	Special Subdivision, Kurinipadi, reconstructing bridge at M. 15/3 of Cuddalore-Vridhachalam road.	19th December 1954, <i>f.n.</i>
Do.	Kandamanadi (Ponnai Bridge Works).	18th March 1955, <i>f.n.</i>

ADMINISTRATION REPORT OF THE

Name of division. (1)	Name of work. (2)	Date of formation. (3)
Chingleput Division ..	C.R.F. Works, Chingleput-Kelambakkam.	22nd March 1955, a.n.
Coimbatore Division I ..	Erode Lower Bhavani Project ..	15th September 1954, f.n.
Coimbatore Division II ..	Do. ..	28th September 1954, f.n.
Coimbatore Division III ..	Do. ..	28th August 1954, f.n.
Coimbatore Division IV ..	Erode Lower Bhavani (Chennamalai-Mukar).	1st November 1954, f.n.
South Arcot Division ..	Thookumerumpakkam-Cuddalore Special.	7th July 1954, f.n.
Do. ..	Tirukoilur Investigation work ..	17th August 1954, f.n.
Chingleput Division ..	Madras Bridges Section ..	20th December 1954, f.n.
Saidapet ..	Mechanical Section ..	1st December 1954, f.n.
South Kanara Division ..	Hosmata-Uppinangadi Bridge works ..	1st July 1954.
Chingleput Division ..	Covelong Bridge Works, Kelambakkam.	9th July 1954, f.n.
Malabar Division ..	Special Section, Mahe ..	1st April 1954, f.n.
Kozhikode Division ..	Special Section, Kuttipuram ..	2nd June 1954, a.n.
Tanjore Division ..	Thirumangadu ..	10th June 1954.
South Kanara Division ..	Badagara Section ..	4th June 1954, f.n.
Kozhikode Division I ..	Payyanur Section ..	9th June 1954, f.n.
North Arcot Division ..	Investigation Work, Peranampet ..	10th September 1954, f.n.
Coimbatore Division ..	Attakatty (Special Section) ..	14th September 1954, f.n.
Mangalore Division ..	Nileshwar Bridge work ..	9th April 1954, f.n.
Do. ..	Investigation Puthur-Durbanmanian road.	7th October 1954, f.n.
South Arcot ..	Special Section at Mylam ..	15th January 1955, f.n.
Do. ..	Vanur ..	5th July 1954, a.n.
Do. ..	Cuddalore ..	Do.
South Kanara ..	Kanhanzad (Special) ..	8th October 1954, f.n.
Do. ..	Vittal (Special Section) ..	2nd August 1954, f.n.
South Kanara Division ..	Moodabidri ..	8th June 1954, f.n.
Do. ..	Coondapur ..	1st July 1954, f.n.
Do. ..	Adoni ..	8th June 1954, f.n.
Tirunelveli District ..	Alangur, Hanmat Bridge Work, Kadaba.	14th July 1954, a.n.
South Kanara Division ..	Bridges Section, Udipi ..	1st November 1954, f.n.
Do. ..	Bridges Special Section Mulki ..	3rd November 1954, f.n.
North Arcot Division ..	Ilampet Special Section ..	31st October 1954, f.n.
Coimbatore Division ..	Mechanical Section ..	9th December 1954, f.n.
Palghat Division ..	Investigation, Peringothukurussy-Cochin Frontier road.	20th December 1954, f.n.
Coimbatore Division ..	Palladam Block ..	20th December 1954, f.n.
Chingleput Division ..	Special Section, Avadi ..	9th October 1954, a.n.
Do. ..	Special Section, Poonamallee ..	7th October 1954, f.n.
Do. ..	Special Section, Amathur ..	13th October 1954, f.n.
South Arcot Division ..	Cuddalore ..	15th January 1955, f.n.

Name of division. (1)	Name of work. (2)	Date of formation. (3)
South Arcot Division ..	Kandamangalam ..	6th July 1954, f.n.
Do. ..	Valudavoor (Cuddalore) Special ..	8th July 1954.
Do. ..	Villupuram Special Section ..	7th July 1954, a.n.
Chingleput Division ..	....	....
Madras I ..	Congress Exhibition ..	14th December 1954, f.n.
Madras II ..	Do. ..	6th December 1954, f.n.
Madras III ..	Do. ..	7th December 1954, f.n.
Madras IV ..	Do. ..	16th December 1954, f.n.
Kozhikode ..	Kozhikode Special Section ..	9th June 1954, f.n.
Special Division ..	Special Works, Kozhikode ..	24th May 1954.
Kozhikode Division ..	Special Investigation Work ..	15th January 1955.
Do. ..	Kozhikode Division ..	23rd August 1954.
Malabar Division ..	Sankaranarayana ..	2nd June 1954.
Villupuram Division ..	Ponnar Bridge Works ..	28th January 1955.
South Kanara Division ..	Surakal ..	21st August 1954.
Research Station I ..	Soil Research Station ..	11th May 1954, f.n.
Research Station II ..	Do. ..	5th August 1954, a.n.

CHAPTER III.

WORKS.

1. *General.*—There were 8,626 miles of Government roads and 17,301 miles of district board roads at the commencement of the year 1954-55, i.e., 1st April 1954. Besides the regular maintenance of these roads, 848 miles were blacktopped, 513 miles metalled and 267 miles were formed under Government and district boards during the year 1954-55 and 48 miles of roads were taken over from the local bodies. Details of roads improved or newly formed and taken over from the local bodies are given in Annexures 6 and 7 respectively. The position of various types of roads as on 31st March 1955 is indicated below:—

	Government.	District Board.
	MILES.	MILES.
Cement concrete roads ..	245	1
Blacktop roads ..	3,781	261
Metalled roads ..	4,558	8,521
Unmetalled roads ..	88	8,930
Total ..	8,672	17,713

2. *Maintenance.*—The expenditure on maintenance of Government and District Board roads compared with five preceding years is given below :—

Year.		Government roads. RS.	District Board roads. RS.
Composite State of Madras —			
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
Residuary State of Madras—			
1953-54	.. .. .	2,61,25,682	83,43,187
1954-55	.. .. .	2,38,21,198	76,78,244

The division-wise details of expenditure on the maintenance of Government and District Board roads during the year 1954-55 are given in Annexure 11 (i) and (ii).

Cost per mile.—The average cost of maintenance per mile without regard to type of roads surface for the past years and for the year under report is furnished in Annexure 2 and an analysis of average maintenance cost of various categories of roads during the past few years is rendered below :—

Year.	Average cost of maintenance of								
	Government Roads.					District Board Roads.			
	National Highway.	State Highway.	Major District Roads.	Other District Roads.	Average cost on the total mileage.	Major District Roads.	Other District Roads.	Village Roads.	Average cost on the total mileage.
Composite State of Madras.									
1950-51	3,488	2,659	2,242	2,670	2,492	932	595	353	571
1951-52	3,576	3,009	2,406	1,981	2,679	947	590	362	568
1952-53	3,779	3,224	2,629	1,763	2,883	922	634	353	563
Residuary State of Madras.									
1953-54	4,474	3,448	2,654	2,283	3,028	1,071	515	245	482
1954-55	3,842	3,057	2,466	1,986	2,747	902	459	230	433

The statistics shows a downward trend in the maintenance cost. This is mainly due to provision of improved surfacings to the roads extensively taken up under maintenance grant during the previous years.

The figures give a broad indication of the relative standards of the different categories of roads. The large disparity between the standards of Government roads and District Board roads is also an indication of the relative inadequacy of available funds on District Board side. This statement however need be qualified by the fact that the traffic on District Board roads is generally much less than that on Government roads. The division-wise classification of maintenance expenditure according to categories of roads is given in Annexure 13 and as abstract of it is given in Annexure 3.

Blacktopping in built-up areas.—During the year the policy of blacktopping in built-up sections was pursued and several roads radiating from town limits and those in heavy traffic reaches were surfaced with precoated chips ensuring a better and more serviceable road surface.

National Highways.—During the year a final grant of Rs. 42.00 lakhs including agency charges was sanctioned by the Union Government for the maintenance and repairs including special repairs of National Highways. Against this, the actual expenditure incurred for the maintenance of National Highways during the year was Rs. 41,79,671.

3. *Capital works.*—The bulk of all works of improvement 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 scheme is furnished below :—

(a) (i) *The Five-Year Plan.*—Under this scheme, the State had an allocation of Rs. 357.66 lakhs and the scheme was prepared with the following provisions :—

	IN LAKHS.
	RS.
State Highways	169.40
Other roads	89.40
Tools and Plant	98.86
Total	357.66

During the year under review, an expenditure of Rs. 21.08 lakhs was incurred on State roads and Rs. 21.55 lakhs on other roads, i.e., a total amount of Rs. 42.63 lakhs was expended during 1954-55 against the target programme of Rs. 33.43 lakhs.

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 Schemes.

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

(ii) *National Highways.*—In respect of National Highways, Government of India sanctioned during the year 1954-55 a final grant of Rs. 29,24,200 including agency charges under original works. Against this allotment an expenditure of Rs. 27,98,328 was incurred exclusive of agency charges.

Under the Five-Year Plan of National Highways, the Union Government approved during the year the following schemes costing Rs. 96.61 lakhs as supplementary items of works:—

Name of work.	Estimated cost, RS. IN LAKHS.
1 Formation of a bypass at M. 10/6 of Karur-Pugalur road—National Highway 7—Job No. 765 MD 7.	0.29
2 Blacktopping National Highway 7 between Dindigul and Tirunelveli.	17.00
3 Constructing a bridge over South Ponniyar river at M. 104/4-5 of National Highway 45.	17.50
4 Blacktopping the remaining stretches on National Highway 45.	4.00
5 Widening to standard width the existing blacktop surface on Ranipet-Krishnagiri road—National Highway 46.	2.00
6 Widening the blacktop surface on Madras-Bangalore road in Chingleput.	2.00
7 Blacktopping the entire stretch from Salem to Coimbatore on National Highway 47.	15.0
8 Extending the Ramnad-Mandapam road from Mandapam to Mandapam Camp Marine Works op—National Highway 49.	1.50
9 Constructing a bridge over Cauveri at Tiruchirappalli on National Highway 45.	32.50
10 Widening and blacktopping M. 29/0 to 33/0 of National Highway 5—Job 860 MD 5.	1.59
11 Forming a diversion road from M. 303/4 to 34/0 of National Highway 7 in Madurai district—Job No. 920 MD 7.	1.23
12 Reconstructing the bridge No. 292 at M. 222/2 between Kalipatti and Medonall's Choultry Stations.	2.00
Total ..	96.61

Besides, technical approval and financial sanctions to the tune of Rs. 101.97 lakhs for the following original works were also accorded by them:—

Name of work.	Job number.	Estimated cost, (including agency charges), RS.
Tiruchirappalli Division.		
1. Blacktopping the stretch M. 152/0 to 240/2 of National Highway 45 in Tiruchirappalli Division.	1,093 MD 45	6,97,000
Ramanathapuram Division.		
2. Land acquisition for forming a bye-pass at Manamadurai on National Highway 49—Ramanathapuram Division.	1007 MD 49	10,400
3. Land acquisition for forming a bye-pass at Parthibanur on National Highway 49.	1008 MD 49	10,000
4. Blacktopping the water bound macadam portions in M. 327/0 to 356/1 of National Highway 7.	1087 MD 7	2,82,800

Name of work.	Job number.	Estimated cost, (including agency charges), RS.
Ramanathapuram Division—cont.		
5. Extending Ramnad-Mandapam road upto Mandapam dry dock, via Mandapam Camp National Highway 49.	1192 MD 49	1,27,500
6. Reconstructing a culvert at M. 49/2 of Madurai-Dhanu hkodi road—National Highway 49.	1295 MD 49	25,600
Coimbatore.		
7. Blacktopping M. 236/0 + 500' to 293 6 + 160' of Salem-Cochin road—National Highway 47.	930 MD 47	7,56,000
8. Blacktopping M. 307/0 to 310/0, 312/5 to 315/0 and 320/0 to 323/0 of National Highway 47.	1136 MD 47	3,53,400
9. Constructing a diversion road in M. 343/1 to 344/5 of National Highway 47 necessitated by Walayar Project.	1129 MD 47	3,04,100
10. Construction of a bridge and cone culverts across Walayar river on the diversion road in M. 343/1 to 344/5 of National Highway 47.	1182 MD 47	1,99,7
Tirunelveli Division.		
11. Blacktopping the water bound macadam portions in M. 363/8 to 431/7 of National Highway 7.	1088 MD 7	3,85,700
Madurai Division.		
12. Forming a diversion road from M. 303/4 to 304/3 of National Highway 7.	920 MD 7	1,23,000
13. Blacktopping the water bound macadam portions including widening of appropriate reaches in M. 251/0 to 324/7 of National Highway 7.	1090 MD 7	4,97,100
14. Blacktopping the water bound macadam portions in the stretch M. 241/0 to 257/0 of National Highway 45.	1094 MD 45	1,63,000
Chingleput Division.		
15. Widening the blacktop surface in M. 15/4 to 48/0 of National Highway 4.	1154 MD 4	2,19,000
Salem District.		
16. Blacktopping M. 236/6 to 265/6 plus 320' of National Highway 47.	929 MD 47	5,59,500
17. Constructing a bridge at M. 187/4 across Ponniyar river on National Highway 7.	985 MD 7	1,71,000
North Arcot.		
18. Constructing a bridge across Palar at M. 71/1-5 of National Highway 46.	1011 MD 46	19,75,000
South Arcot.		
19. Constructing a bridge across South Pennar at M. 104/2-5 of National Highway 45.	990 MD 45	33,32,000
Total ..		1,01,96,800

(iii) *Development of West Coast Road.*—Government of India originally approved on half-grant basis a comprehensive scheme consisting of 24 bridge works and 63 road works including 7 bridge works and 4 road works already taken up under Post-War Road Development Programme, at an estimated cost of Rs. 155.76 lakhs for the development of a thorough all weather route on the West Coast as a part of Bombay-Cape Comorin road. During the year, the Union Government on a further recognition of the importance

and urgency of the scheme assumed the full financial responsibility of the expenditure incurred on the works from 1st April 1955. The scheme originally approved at an estimated cost of Rs. 155.76 lakhs was found to require revision due to the following reasons and a revised programme costing Rs. 282.5 lakhs was submitted to Government :—

(i) During investigation and preparation of estimate the provisions already made in the programme on a rough basis were found quite inadequate in many cases and increased provisions had to be made.

(ii) Higher standards and improved geometric features had to be adopted in other cases.

(iii) Additional works were found necessary for this purpose and to make up for missing links of roads here and there.

Pending receipt of the approval of Government of India to the revised programme plans and estimates for the works were being prepared on the basis of the programme drawn up.

During the year, an expenditure of Rs. 8.1 lakhs was incurred on this scheme.

(b) *Central Road Fund Scheme.*—During the year, the Madras State had an allocation of Rs. 29.68 lakhs bringing up the total allotment under the scheme to Rs. 493.00 lakhs. An expenditure of Rs. 29.15 lakhs was incurred against this allotment for the year, making the total projective expenditure to end of 1954-55 to Rs. 402.48 lakhs both under Government and district boards.

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

Year.	Expenditure incurred on		
	Government works.	District board works.	Total. RS.
<i>Composite State of Madras.</i>			
1949-50	13,28,516	1,75,659	15,04,176
1950-51	16,65,615	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
<i>Residuary Madras State.</i>			
1953-54	20,14,861	15,06,139	36,21,000
1954-55	7,24,086	12,91,881	20,15,967

During the year 1954-55 approval of Government of India to a new programme of 43 road and bridge works estimated to cost Rs. 66.05 lakhs for being financed from the State allocations of the Central Road Fund was communicated in G.O. Ms. No. 4108, Public Works, dated 23rd November 1954. Plans and estimates for these schemes were being prepared and the works put into execution after obtaining the technical sanction of competent authority to the estimates meeting the expenditure incurred on them during the year initially from the advance from the Contingency Fund pending approval of the Legislature.

(c) Grants-in-aid to local bodies under "Excluding Post-War Reconstruction."

Grants are allocated to the district boards by the State Government under "Excluding 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 Collector concerned. are given in the statement below in respect of the sub-heads mentioned above :—

Grants thus sanctioned by Government and expenditure incurred thereon

Sub-head.	Accounts 1953-54 (second six months). RS.	Revised Estimate, 1954-55. RS.
Village communications other than Post-War Reconstruction.	54,408	2,25,000
Roads and bridges other than village communications.	1,86,933	1,24,000
Improved surfacing of roads	10,614	2,02,000
Flood damage to roads	..	..
Special grant for road work to relieve unemployment due to failure of monsoon.	5,63,045	12,10,606

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.
<i>Composite State of Madras.</i>		
1946-47	45,66,518	14,55,197
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
<i>Residuary State of Madras.</i>		
1953-54	65,48,329	42,83,202
1954-55	65,35,104	41,96,401

Divisionwise 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 furnished in Annexure 13.

Works completed.

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

(a) *Government works—Upgrading.*—Fifty-nine works at a total cost of Rs. 11,61,597 were completed during the year by which 763 miles of roads were blacktopped.

Bridges and culverts.—Four major bridge works costing Rs. 11,45,171 and 72 minor bridges, culverts and causeways to a total cost of Rs. 5,15,579 were completed.

Improvements and special repairs.—Twenty works costing Rs. 5,70,216 were completed during the year.

(b) *District board works—Bridges and culverts.*—Three major bridges costing Rs. 5,38,343 and 34 minor bridges, culverts and causeways at a total cost of Rs. 2,94,599 were completed.

Improvements and special repairs.—Forty-three works costing Rupees 6,15,231 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 :—

Nature of work.	Number.	Estimated cost. rs.
<i>(a) Government Works.</i>		
Works costing over rupees one lakh each.		
Cement concrete and blacktop	14	59,58,300
Bridges, culverts and causeways	31	1,77,67,900
New formations	3	27,21,000
Improvements and special repairs	4	12,00,000
Works costing less than rupees one lakh each.		
Cement concrete and blacktop	3	26,200
Bridges, culverts and causeways	17	4,60,600
New formations	3	2,31,870
Improvements and special repairs	34	4,20,090
<i>(b) District Board Works.</i>		
Works costing over rupees one lakh each.		
Cement concrete and blacktop	..	..
Bridges, culverts and causeways	11	39,65,000
New formations	8	16,02,400
Improvements and special repairs	..	..
Works costing less than rupees one lakh each.		
Cement concrete and blacktop	12	1,91,900
Bridges, culverts and causeways	90	17,55,600
New formations	282	55,57,657
Improvements and special repairs	70	7,74,300

A detailed review of works costing over rupees one lakh each is given in Annexure 22 (i) and divisionwise figures of works costing less than one lakh of 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 the National Plan in 1951, of these, certain works were under execution, some were completed and some 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.

1. *Constructing bridge at M. 73/1 of Calicut-Mysore Frontier road (Malabar district).*—The work was sanctioned in G.O. No. 1020, Public Works, dated 8th March 1952, under Road Development Fund at a cost of Rs. 1,19,403 and it was under construction during the year. This is a single-span bridge of 60 feet R.C. T-Beam-cum-slab. The masonry for the abutment and wings on the Mysore side could be taken up only after getting permission of the Mysore Government. They were nearing completion and the centering for the decking was in progress.

2. *Constructing a bridge at M. 66/7 of Calicut-Mysore Frontier Road (Malabar district).*—The work was sanctioned in G.O. No. 1020, Public Works, dated 8th March 1952, under Road Development Fund at a cost of Rs. 1,25,000. This is a continuous slab bridge of three spans of 28.5 feet, 33.5 feet and 28.5 feet as well foundation. For both the abutment wells rock was not met with at the estimated depth. So, further sinking of wells was taken up. However, well sinking was completed except on Kozhikode side abutment.

3. *Reconstructing Puchamogar bridge at M. 5/5 of Mudabidri—Buntwal road (South Kanara district).*—The work was sanctioned in G.O. No. 1813, Public Works, dated 10th May 1950, under Development Scheme at a cost of Rs. 4,40,000. The bridge consists of six spans of 90 feet each. The total length of the bridge when completed would be 638 feet 6 inches with roadway width of 22 feet. This is a major bridge situated on the proposed West Coast Road (Cape Connorin—Bombay road). This is a new type of bridge in South Kanara district. The superstructure consists of Hollow R.C. Box girders, continuous over three spans. The whole bridge consists of two such units the first of the kind in the State. The clear roadway between curbs is 22 feet and the deck is designed to carry I.R.C. class 'AA' loading. All the piers and abutments of the bridge will have open foundations. The piers, abutments and wings are of cement concrete 1 : 3 : 6 with one inch granite metal and 20 per cent of 6 inches to 8 inches plums and provided with nominal reinforcement. All the piers and abutments have come up to deck level.

4. *Construction of a bridge over Nileshwar river at M. 50/2 of Kanhanad-Cheruvathur road (South Kanara district).*—This work was sanctioned in G.O. No. 2268, Public Works, dated 21st June 1949, under Development Scheme. The superstructure of this bridge is of the balanced canti-lever type. The spans of 80 feet each, two outer canti-levers of 35 feet, two with two main spans of 25 feet and a suspended span of 50 feet. When completed the total length of the bridge would be 330 feet with a roadway of 22 feet wide. This is also situated on the proposed West Coast Road. The piers and abutments rest on well foundations. All the wells were sunk to the

required levels. Full-scale load tests were also conducted on two of the wells of this bridge. The wells are now plugged, and filling up the wells and laying of the capping slabs are completed. Masonry for piers is just commenced.

5. *Construction of a bridge across the Ariadkadavu Hole at M. 52/8 of Kannangad-Cheruvathur Road (South Kanara district).*—The work was sanctioned in G.O. No. 2298, Public Works, dated 21st June 1949 under Development Schemes and is situated on the proposed West Coast road. This is also a balanced canti-lever type of bridge with a linear waterway of 593 feet. The superstructure consists of 4 main spans of 82 feet centre to centre of supports with the inside canti-levers of 9 feet and 3 suspended spans of 64 feet. The outside canti-levers are 20 feet span. All the wells were sunk to the estimated depths, but rock was not met with. Borings were taken during execution and rock was not met with even at 100 feet below bed-level. Plate bearing tests were therefore carried out to find out the peg power of the clayey strata met with. One well is kept open for conducting plate bearing test for the second time. Further work can be done only after decisions regarding the foundations and sub-structure are taken.

6. *Reconstruction of Belthangadi bridge at M. 37/3 of Mangalore-Mysore Road (South Kanara district).*—The work was sanctioned in G.O. No. 3868, Public Works, dated 22nd August 1952, under Development Schemes at a cost of Rs. 2,75,000. The bridge consists of 4 spans of 60 feet each and the total length of the bridge is 264 feet excluding wings which are 30 feet length on either sides. The superstructure of the bridge is of R.C. T-Beam-cum-slab with a clear roadway of 22 feet and designed for I.R.C. class 'A' and 'AA' loadings. All the three piers and abutments are founded on rock with open foundation. The piers are of C.R. masonry second sort in cement mortar 1:5 and have come up to deck level and the abutments are in progress.

7. *Construction of a bridge across Perumpuzha at M. 75/8 of Calicut-Cannanore-Baindar Road (Malabar district).*—The work was sanctioned in G.O. No. 1510, Public Works, dated 28th April 1949, at a cost of Rs. 5,70,000 under Development Scheme. The work is in progress and 440 running feet of well sinking is completed.

8. *Constructing a submersible bridge over Gundia river at M. 15/1 of Bisley Ghat Road (South Kanara district).*—The work was sanctioned in G.O. No. 5071, Public Works, dated 11th December 1951, at a cost of Rs. 2,40,000 under Development Schemes. Three decks have been laid. The original sanctioned estimate provides for open foundation for all the piers and abutments. Accordingly the work was put on hand and the foundation works for piers 1 to 3 and 11 to 16 were carried out with very great effort. For piers 4 to 10 it was found practically impossible to go in with open foundations on account of standing water of about 4 feet depth and also due to the heavy springs and blowing up of sand and slushy soil beyond 10 feet depth. Therefore, it is proposed to provide well foundations for piers 4 to 10.

9. *Constructing a bridge across Coleroon river at Anaikaranchatram on Chidambaram-Sirkali Road—Estimate Rs. 28,50,000.*—The work continued to be in progress throughout the year.

The sheathing material (cold rolled strips 175×0.2 mm.) and the sheath-making machine, both of which had to be imported from France, were received at the site during the first week of December 1954 and from thereon the stage was quickly set for the production of prestressed concrete beams. The first beam was concreted on 22nd December 1954 with proper organization and

training of workmen. The time required for the casting of beams was steadily reduced from about 18 days in the beginning to 6 or 7 days during the latter half of February and March 1954. By the end of the year nine beams were cast and as the stock yards were already full, special arrangements had to be made to increase the storage capacity.

The detailed designs and drawing of the launching girder and equipments required for the launching of the beams were received from Germany in July 1954 and orders were placed by the contractor for the manufacture of these.

With the assistance rendered by the department in securing necessary railway stores and critical structural sections which were not in supply, good progress was made in the fabrication of the launching devices.

The travelling crabs designed to work on the monrail of the launching girder along with hydraulics jacks and suspension rods were manufactured and supplied by Krupps of Germany. All these equipments were received at the site during October 1954 and were erected and tested under departmental guidance.

As the German Design of the launching girder did not provide for the launching of the beams of the first span, a number of other alternative schemes were examined for the launching of the first span beams without the aid of the launching girder. Finally a scheme making joint use of the trollies and a transport car was adopted and working arrangements were made as per details worked out.

The following bridge works were also in progress:—

(1) *Constructing a bridge across Agavalam river at M. 13/2 of Arkonam-Ocheri Road—Estimate Rs. 2,00,000.*—Pier completed and decking is in progress.

(2) *Constructing a bridge across Palar at M. 71/1-5 of Ranipet-Krishnagiri Road—National Highway No. 46—Estimate Rs. 19,75,000.*—Work just entrusted on contract and commenced late in the year.

(3) *Constructing a bridge across river Goundanya at M. 18/7-8 of Katpadi-Venkatagirikotta Road—Estimate Rs. 2,75,000.*—Work just entrusted on contract and commenced late in the year.

(4) *Constructing a bridge across Palar at M. 38/5-8 of Madras-Dindigul Road—Estimate Rs. 25,00,000.*—The work was almost completed during the year except the finishing touches for opening the bridge for traffic. This has also been since done and the bridge was opened for traffic on 12th June 1955. The total expenditure is Rs. 22,98,072.

(5) *Constructing a causeway at M. 27/5 of Tirumuzhi-Satyavedu Road—Estimate Rs. 2,86,000.*

(6) *Constructing a causeway across Cheyyar river at M. 7/1-2 of Kancheepuram—Uthiramerur Road—Estimate Rs. 1,96,000.*

(7) *Constructing a causeway across Palar river at M. 13/5 to 14/1 of Uthiramerur-Kancheepuram Road—Estimate Rs. 1,70,000.*

(8) *Constructing a causeway at M. 13/1 of Nelvooy-Tirukkalikunram road across Palar river—Estimate Rs. 4,25,000.*

(9) *Constructing a bridge over the backwaters of Buckingham Canal near Covelong—Estimate Rs. 1,78,700.*

(10) *Widening the existing blackton surface on National Highway 4 (Madras-Bombay Road)—Estimate Rs. 2,00,000.*

(11) *Strengthening and widening the bridge at M. 166/4 of Benares-Cape Comorin road—Estimate Rs. 2,45,000.*

(12) *Reconstructing the bridge at M. 187/4 of Madras-Bangalore road—Estimate Rs. 1,40,000.*

(13) *Constructing a causeway at M. 13/4 of Dharmapuri-Tirupathur Road—Estimate Rs. 1,40,000.*

(14) *Constructing a causeway at M. 9/8 of Dharmapuri-Tirupathur Road—Estimate Rs. 78,000.*

(15) *Bridge across Sankaravarani at M. 37/7-8 of Merkanam-Tindivanam-Gingee Road—Estimate Rs. 1,75,000.*

(16) *Reconstructing the bridge at M. 1/1 of Merkanam-Tindivanam Road—Estimate Rs. 2,75,000.*

(17) *Reconstructing the bridge at M. 15/3 of Cuddalore-Vridhachalam Road—Estimate Rs. 3,00,000.*

(b) *Cement concrete and blacktop works.*

1. *Cement concreting Benares-Cape Comorin Road—Miles 219 to 228—Estimate Rs. 6,21,000.—The main work has been completed.*

2. *Blacktopping Salem-Cochin Road—M. 236/6 + 500 feet to 265/6—Estimate Rs. 5,59,500.—The portion of Salem-Cochin road in this division from M. 231/5 to 236/5 was provided with a blacktop surface of 22 feet width last year and the remaining length of road M. 236/5 to 265/6 was provided with blacktop surface during the year under report. The estimated cost of the work was Rs. 5,59,500 out of which an expenditure of Rs. 3,76,000 was incurred and the work was nearing completion. The entire road was blacktopped except at two furlongs where the road to be cut and levelled.*

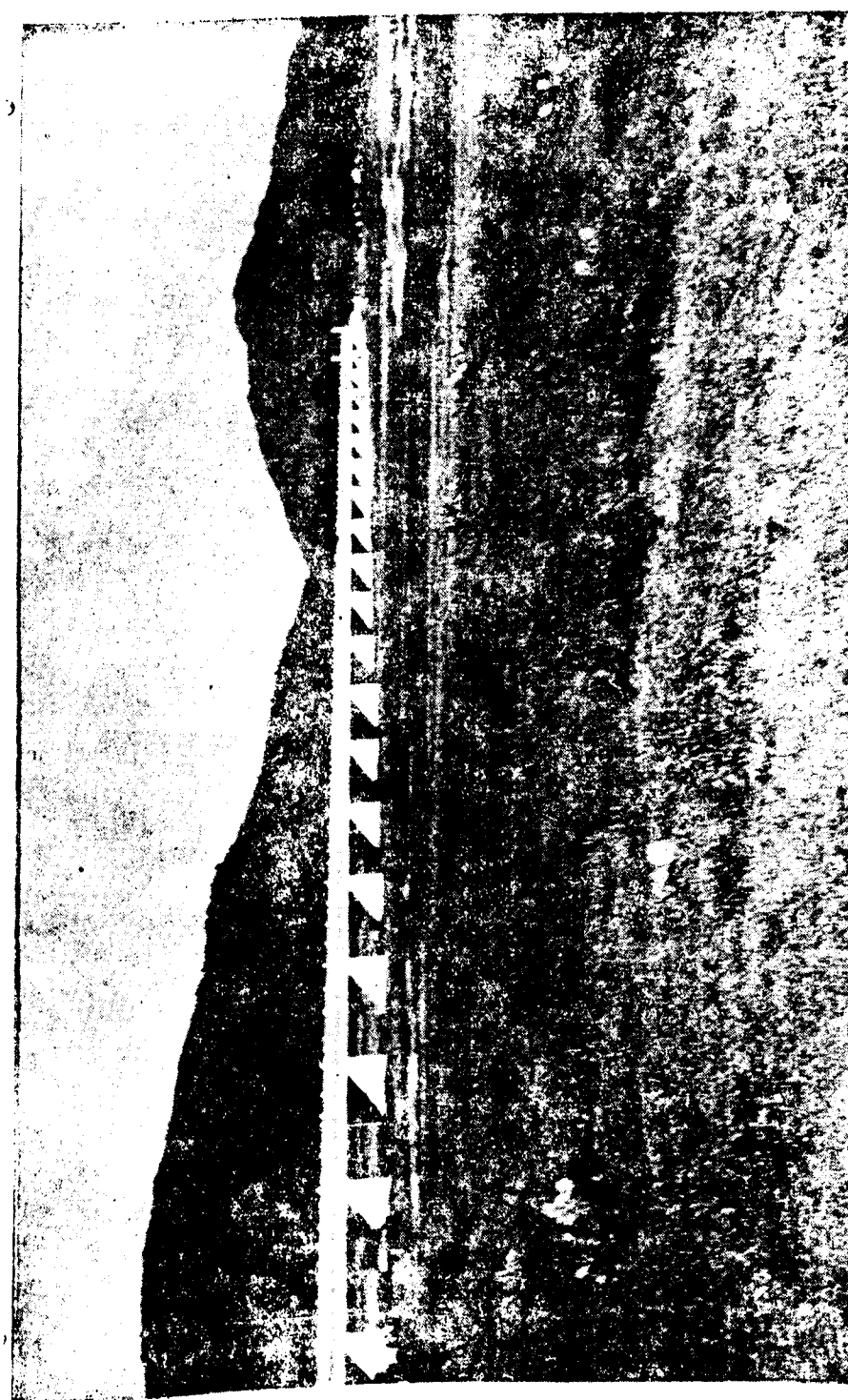


FIG. III (A)—BRIDGE ACROSS PALAR AT M. 38/5 OF MADRAS-DINDIGUL ROAD.

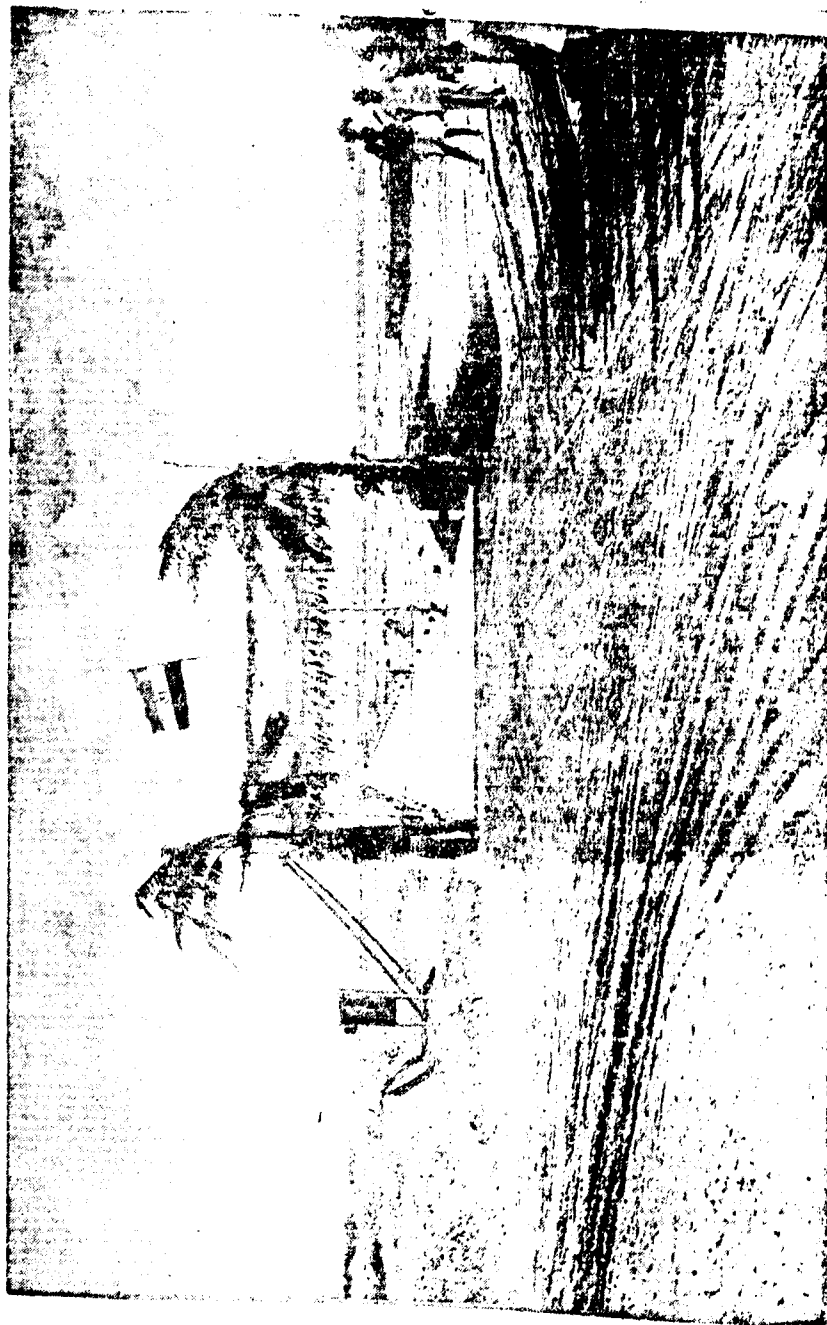


FIG. III (B)—AUSEWAY ACROSS C.I. YVAR AT M. 71.2 OF KANCHEEPURAM UTHIRAMERUR ROAD.



FIG. III (C)—OPENING CEREMONY OF CHEYYAR CAUSEWAY AT M. 71.2 OF KANCHEEPURAM UTHIRAMERUR ROAD, BY SRI SHANMUGA RAJESWARA SETHUPATHI, MINISTER FOR PUBLIC WORKS, GOVERNMENT OF MADRAS.

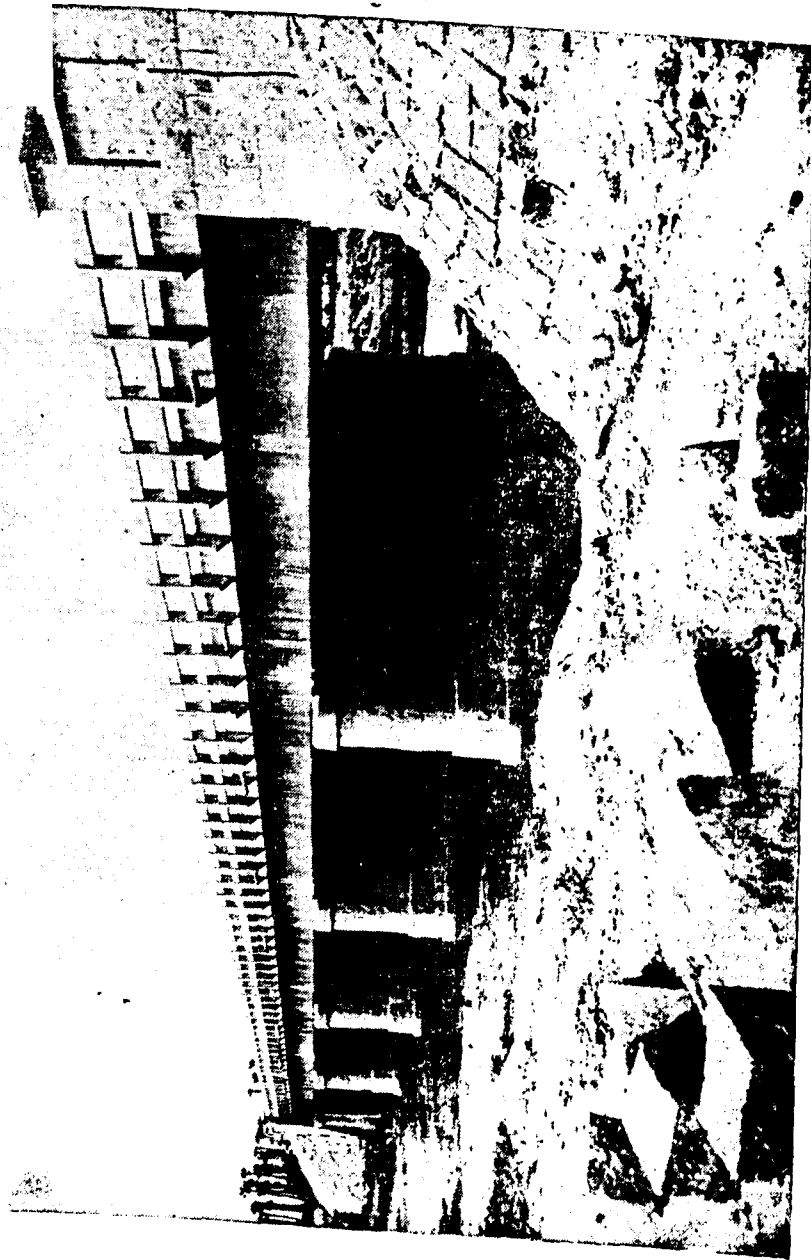


FIG. III (D).—BRIDGE ACROSS AGAVALAM RIVER AT M. 13 1/2 OF ARKONAM-OCHEHI ROAD.

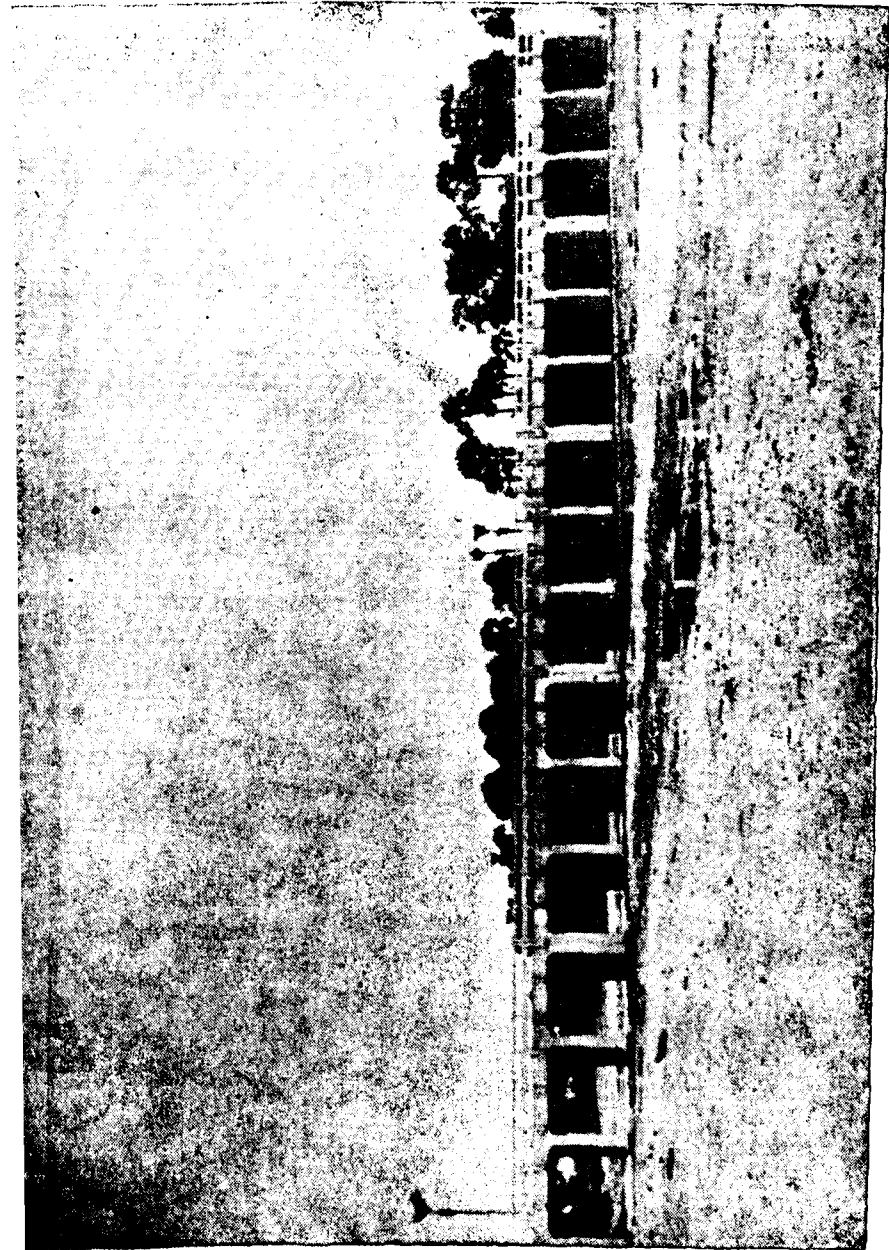


FIG. III (E).—BRIDGE ACROSS AGAVALAM RIVER AT MILE 13 1/2 OF ARKONAM-OCHEHI ROAD.

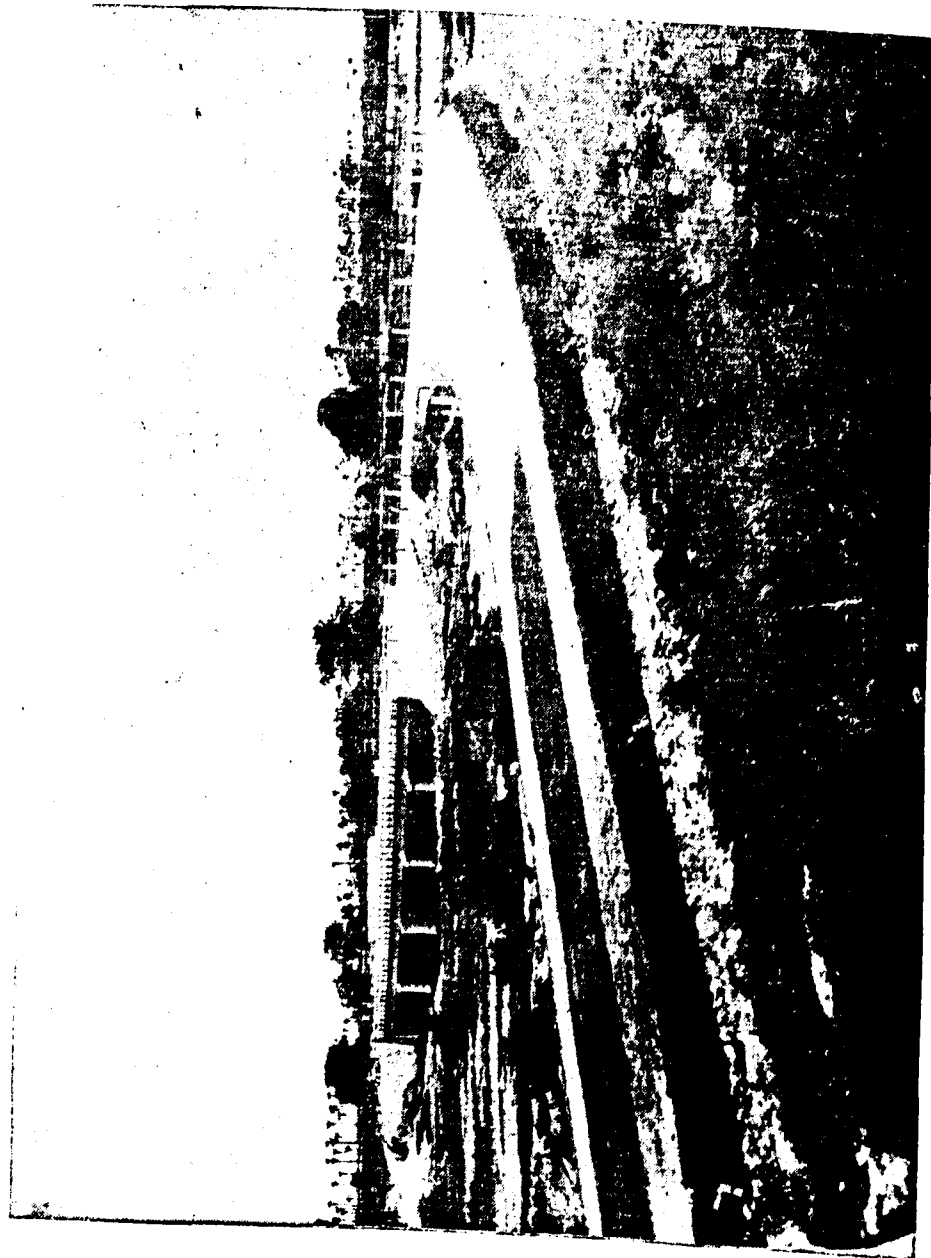


FIG. III (F).—BRIDGE AT M. 9/8 OF EDAPADY-KUMARAPALAYAM ROAD.



FIG. III (G).—CONSTRUCTING A CAUSEWAY ACROSS PENNAR NEAR MELAPATTAMBAKKAM
FINISHING CONCRETE IN DEEP VENTED PORTION.

CHAPTER IV.

RURAL DEVELOPMENT WORKS.

The aim of this plan is "to organize the villagers for a happier and more prosperous future 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 sevak sangams in preference to professional contractors. The untapped energy of the villagers is thus canalized for developing the country side.

3. On the 2nd October 1953, the birth day of Mahatma Gandhi, a new scheme called the National Extension Service was launched in 28 blocks in the Residuary State of Madras. Further 10 blocks were launched in 1954-55. The total blocks on 31st March 1955 were 38 and they 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, 4 Community Development Blocks as detailed in Statement II were sanctioned in 1953-54. There were no additions in the year 1954-55.

Similarly there were no additions to the Community Projects already existing.

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

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

The progress of work done in the Community Development areas of the Madras State up to the end of 31st March 1955 was as follows:—

	Length of pucca roads constructed in miles.	Length of katcha roads constructed in miles.
Community Projects	32	623
Community Development Block	21	77
National Extension Service Schemes	152	466
National Extension Service Tanjore District Scheme.	14	45
	<u>219</u>	<u>1,211</u>
Total in all—1,430.		

STATEMENT I.

National Extension Service Schemes, 38 blocks as on 31st March 1955.

1 Chingleput district	(1) Uthukottai. (2) Tiruvallur. (3) Kadambathur.
2 North Arcot district	(1) Nandakolathur. (2) Kalasapakkam. (3) Tiruvannamalai.
3 Salem district	(1) Krishnagiri. (2) Peddanaickanpalayam. (3) Athur.
4 South Arcot district	(1) Panruti. (2) Kurinjipadi. (3) Chinnasalem.
5 Tiruchirappalli district	(1) Perambalur. (2) Musiri. (3) Karur. (4) Alangudi.
6 Tanjore district	(1) Thiruthuraiipoondi. (2) Vedaranyam.
7 Tirunelveli district	(1) Koilpatti. (2) Kurivikulam. (3) Sankarankoil.
8 Ramanathapuram district	(1) Rajapalayam. (2) Srivilliputhur. (3) Sivakasi.
9 Madurai district	(1) Kallupatti. (2) Usilampatti. (3) Tirumangalam.
10 Coimbatore district	(1) Kangayam. (2) Palladam. (3) Tiruppur.
11 Nilgiris district	(1) Coonoor. (2) Ootacamund.
12 Malabar district	(1) Tellicherry. (2) Taliparamba. (3) Payyanur.
13 South Kanara district	(1) Sullia. (2) Manjeshwar. (3) Baindur.
	— 38 blocks. —

STATEMENT II.

Community Development Blocks.

1 South Arcot district	A portion of Chidambaram taluk round Sethiathope 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.

The Inspection of circle offices was hitherto conducted by the Chief Engineer (Highways) once in two years and that of the division office by the Superintending Engineers (Highways) annually as per the standing orders. During the year under review, Government observed in G.O. No. 1274, P.W., dated 8th April 1954, that the inspection of the circle offices by the Chief Engineer (Highways) and the division offices by the Superintending Engineers (Highways) should be critical and thorough and should be calculated to promote greater efficiency in the department and directed, in modification of their previous orders issued in this connexion, that the Chief Engineer (Highways) should inspect the then existing two circle offices annually one in April and the other in September and submit to Government copies of inspection reports to them by the 20th of May and October respectively every year, and that the Superintending Engineers (Highways) should complete the inspection of the division offices between April and October each year, a suitable programme for such inspection of Superintending Engineers being fixed by the Chief Engineer (Highways). They have also directed that the Chief Engineer's review of inspection reports of division offices be submitted to them between July and December following. Accordingly a programme for the inspection of division offices by the Superintending Engineers (Highways) was drawn up and got approved by Government.

Being the first year of implementing the programme of inspection of division offices by the Superintending Engineers (Highways) certain deviations thereto were found to be necessary owing to administrative conveniences and in view of the fact that certain divisions were already inspected by them. In all such cases, orders of Government were sought for and obtained.

(a) *Inspection of division offices by the Superintending Engineers (Highways).*

All the division offices in the jurisdiction of Superintending Engineers (Highways) were inspected by them during the year 1954-55 as per the programme fixed. A brief summary showing the dates of inspection and general control of the division offices is furnished below:—

Name of circle and division.	Programme fixed for inspection.	Date of actual inspection.	Result of inspection.
(1)	(2)	(3)	(4)
(1) <i>Madras Circle.</i>			
Salem	May 1954	9th March 1954 ..	Satisfactory.
Krishnagiri	Do.	14th December 1954.	Do.
Vellore	April 1954	18th January 1954 ..	Fairly satisfactory.
Saidapet	Do.	18th June 1954 ..	Do.
Cuddalore	May 1954	15th March 1954 ..	Satisfactory.
Coleroon Bridge Division ..	Do.	26th November 1954.	Do.
Designs Division	April 1954	21st September 1954.	Do.
Transport and Machinery Division.	October 1954	11th December 1954.	Do.
Nagapattinam	June 1954	22nd January 1954 ..	Do.
Tanjore	Do.	27th February 1954.	Do.
Special Bridge Division, Villupuram.			

Name of circle and division.	Programme fixed for inspection.	Date of actual inspection.	Result of inspection.
(1)	(2)	(3)	(4)
(2) <i>Tiruchirappalli Circle.</i>			
Tiruchirappalli	July 1954	25th September 1954.	Work in the Division was very heavy.
Madurai	August 1954	23rd April 1954 ..	Generally satisfactory.
Ramanathapuram	September 1954	18th August 1954 ..	Satisfactory in most respects.
Tirunelveli	October 1954	28th November 1954 ..	Work in general was satisfactory.
Erode	June 1954	22nd June 1954 ..	Satisfactory.
Coimbatore	July 1954	23rd July 1954 ..	Fairly satisfactory.
Ootacamund	October 1954	17th November 1954 ..	Generally satisfactory.
(3) <i>West Coast Circle.</i>			
Mangalore	September 1954	27th September 1954 ..	Satisfactory.
Kozhikode	July 1954	15th July 1954 ..	Fairly satisfactory.
Palghat	August 1954 .. ..	....	..
Special Divisions in Malabar and South Kanara districts.	....	....	..

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

During the year 1954-55 the circle offices at Tiruchirappalli and Coimbatore were inspected by the Chief Engineer (Highways) on 20th May 1954 and 17th September 1954, respectively, and it was observed that the general control of the office by the Superintending Engineers (Highways) was satisfactory.

The Circle Office at Cannanore came into existence on 18th October 1954. The question of inspection of this circle office during the year under report did not consequently arise.

CHAPTER VI.

STATISTICS.

(a) *Tests, Experiments and Research.*

During the year 1954-55 a number of investigations and tests on soil stabilization, investigation of soils for foundations, tests for the bearing capacity of the foundation soils, tests on stone aggregates, concrete blocks and cores both in Soil Research Laboratory, Guindy, and in the field were conducted.

1. *Soil Stabilization.*

Preliminary field and laboratory investigations were undertaken for the stabilization work for the proposed road from Kovalam to Mahabalipuram. Typical soil samples available for use in the foundation courses were tested in the laboratory and approximate design mixes were arrived at. The results were used in preparing a rough estimate for the work.

The problem of the stabilization of highly plastic soils were also taken up. The tests conducted proved that the presence of common salt in binder soils used for stabilization reduced its plasticity and improves the susceptibility to pulverization and mixing.

2. Soil investigation for foundation of bridges.

(1) Tests were conducted on soil samples obtained from three holes located on three different cross-sections in order to select a suitable site for the proposed bridge across Vasista branch of river Godavari on National Highway No. 5 (Madras-Calcutta Road), Godavari Bridge Division, Andhra State, for consideration of good foundation soil conditions. As a result of the tests, the site near the line joining 17/5 Vasista right bank to 19/1 Vasista left bank was recommended for detailed soil analysis to found the bridge.

(2) Undisturbed soil samples of medium silty clay at Ele. 1,700 of the site of the Nileshtar bridge, South Kanara Division, were tested in the laboratory for their bearing capacity and settlement characteristics and suitable recommendations were made regarding the resting of foundations at that level. For the same bridge a full scale load test also was conducted at the site on one of the wells to find out the exact bearing capacity and probable settlement under the design load at two different periods and also under a 28 per cent increased design load and the results observed and suitable recommendations were offered.

(3) Plate-bearing tests at site were conducted in pier No. 2 of Karingode bridge at mile 52/8 of Kanhangad-Chervattur Road to find out the bearing capacity of the soil and to decide whether it will bear the design load of 3.9 tons/square feet. The soil failed miserably for the design load and the test was given up with the decision that the span of the bridge should be reduced to minimise the load that comes on the foundation soil. This test was done with the use of hydraulic jack and a plate bearing of 2 feet diameter. A similar test was conducted in the other dredge hole of the well with a plate bearing of 1 foot 6 inches diameter and results observed.

(4) Soon after completion of the bridge work at mile 0/3 of the Tiruvottiyur-Ponneri-Panjetty Road, the top of the eastern abutment showed a slight movement at the beam rests towards the stream side. Soil conditions at site were studied and the probable trend in the occurrence was predicted. Further observations were also in progress.

3. Tests.

(1) Stone aggregates from four of the quarries in Ramanathapuram division were tested for Devals attrition, Los Angeles abrasion impact values and crushing values. The three tests except Los Angeles abrasion test are British standards of which impact valve test is a fairly new one.

(2) The sand and aggregates used for the construction of the Coleroon bridge, Sirkali, were tested for their unit weight absorption grading and specific gravity thus making helpful in deciding so many factors in the execution side of the bridge.

(3) Concrete cores and cubes taken from Cuddalore-Chittoor road 122/0, 126/3 and from the bridge work across Agavalam river at mile 13/2 of Arkonam-Ocheri Road, respectively, were tested for their compressive strengths and results found out.

4. Experiments.

In order to have a thorough understanding of the means and methods of launching the beams to solve the many attendant problems, a working model of the launching girder complete with travelling crabs, transport cars, Jim Rollers and cross beams, etc., was made and studied in launching undertaken with models of the Coleroon bridge. As a result of these studies many obscure but critical phases in launching became clear and many problems were solved.

Also tests were conducted with regard to the production of high strength concrete for the pre-stressed concrete beam for superstructure.

(2) For the formation of approach road departmentally for the Poochmogar bridge at mile 5/5 of Moodabidri-Buntwal Road, South Kanara Division, Bull Dozer (HD 9 Allis Chalmers T.M.N. 10-0-5) was tried as an experimental measure. As a result it was observed that savings of about 15 per cent is possible in utilizing the Bull Dozer for such work.

Other activities.

In the day-to-day work in the construction and maintenance of roads and bridges the Highway Engineering meets and deals with soil in one way or another. To know the fundamental properties of the soil, 24 Junior Engineers were trained in three batches of eight at the Soil Research Laboratory, Guindy.

(b) Investigation of roads.

During the year under report, 148 investigations on Government roads and 33 investigations on district board roads were conducted by the department. The comparative figures of investigations conducted since 1946-47 are given in Annexure 21 (i) and the division-wise details for the year 1954-55 are given in the Annexure 21 (ii).

(c) Investigation of bridges and culverts.

The investigation of bridge works was being attended to by the Assistant Engineers for bridge investigation attached to the territorial Superintending Engineers (Highways).

A brief summary of bridge investigations done and the outstanding features encountered during investigation in South Kanara Division is rendered below :—

South Kanara Division.

(1) Constructing a bridge at mile 13/2 of Mangalore-Baindur coast road across Pavanjee.

The river has its source in the plateau about 20 miles east of the proposed bridge site. The catchment area is about 64 square miles. The discharge is about 26,000 cusecs. The bridge will consist of 5 spans of 90 feet and is proposed to be sited about a furlong down-stream of the present ferry site with approaches taking off at miles 12/7 and 13/5 of the existing road. The foundation will be of cement concrete wells taken to hard rock at about 42 feet below average bed level. The superstructure will be of reinforced cement concrete box girder with 24 feet clear roadway decking. The estimated cost of the work is about 7.5 lakhs.

- (2) Constructing a bridge at mile 18/1 of Mangalore-Baindur coast road over Mulki river.

The river has its source in the plateau about 24 miles east of the proposed bridge site. The catchment area is about 129 square miles. The discharge works out to 38,000 cusecs roughly. The bridge will consist of 6 spans of 90 feet and is proposed to be sited about one furlong down-stream of the existing ferry-crossing, with approaches taking off at miles 17/6 and 18/7 of the rock and disintegrated rock met at about 45 feet below average bed level. The superstructure will be of reinforced concrete box with 24 feet clear roadway decking. The estimated cost of the work is about 12.25 lakhs.

- (3) Constructing a bridge at mile 33/5 of Mangalore-Baindur coast road over Udayavar river.

Udayavar.—The river has its course in the plateau about 27 miles east of the proposed bridge site. The catchment area is 116 square miles and the discharge is about 36,000 cusecs. The bridge will consist of 9 spans of 90 feet clear and is proposed to be constructed half a furlong down-stream of the existing ferry site, with approaches taking off from miles 33/2 and 33/7 to hard rock met at an average depth of about 45 feet below bed. The superstructure will be of reinforced concrete box girder with 24 feet clear roadway decking. The estimated cost of the work is about 14.56 lakhs.

Salem Division.

- (1) Bridge at miles 1/5, 2/6 and 3/7 of Athur-Veeraghanur road.
(2) Constructing a bridge at mile 12/2 of Thidavur-Thampatti road.

Nagapattinam Division.

- (1) Constructing a bridge across Vedaranyam at Elandayadi ferry.
(2) Constructing a bridge near Vadapathimangalam.

Krishnagiri Division.

- (1) Reconstructing the vented causeway at mile 20/1 of Denkanikottah-Cuddalore road.
(2) Constructing a bridge at mile 5/7 of Denkanikottah-Cundukottiah road.
(3) Constructing a bridge at mile 7/5 of Denkanikottah-Cundukottiah road.
(4) Formation of a diversion road to avoid two crossings at miles 12/1 and 14/5 of Mecheri-Pennagaram road.
(5) Constructing a causeway at mile 16/2 of Mecheri-Pennagaram road.
(6) Constructing a bridge at mile 9/3 and 4 of Hanumatheertham-Kottapathi road.
(7) Constructing a bridge at mile 20/3 of Hanumatheertham-Kottapathi road.
(8) Reconstructing the bridge at mile 174/5 of Madras-Bangalore road.

(d) Cost of labour and materials.

South Kanara district.—There was no increase in the cost of labour as well as materials during the year. There was acute scarcity for skilled labour and hence there was increase in the cost of bridge works and other major road works as skilled mazdoors had to be imported from other districts.

Malabar.—There was no improvement in labour condition and the cost of materials was on the increase. In spite of this works were got done satisfactorily and in time as there was keen competition among the contractors.

Chingleput.—No scarcity of labour was felt during the year. The cost of materials remained the same as in the previous year with slight variations according to localities.

North Arcot.—Labour charges for skilled and unskilled labourers were considerably increased throughout the district. Labour charges were very high at Tiruvannamalai and Gudiyatham taluks. In Tiruppattur and Gudiyatham taluks even unskilled labourers for breaking road metal has to be imported from Salem district. Hence special rates had to be allowed in Tiruvannamalai, Tiruppattur and Gudiyatham taluks.

Salem.—Cost of labour showed downward trend during 1954-55.

Nagapattinam.—Cost of materials and labour have been steady throughout the year.

Krishnagiri.—Dearth of labour in Hosur, Harur, Uthangarai and Pennagaram firkas continued. Out of 98 tenders 51 were above estimate ranging from 2½ per cent to 25 per cent above. The need for restoration of 10 per cent cut in the schedule of rates was again stressed and the same was restored for the year 1955-56 as far as Harur, Hosur, Pennagaram, Uthangarai and ghat section in other reaches are concerned.

The response for black top work was very poor due to (i) high cost of fuel, (2) inadequacy of trained labour and (3) extra cost for chips.

South Arcot.—Labour was generally available. Skilled labourers such as "divers" had to be imported from outside the district.

Tiruchirappalli.—No appreciable change in cost of labour and materials was noticed during 1954-55.

Ramanathapuram.—Due to very good seasonal rains and all-round improvement of the masses, prices had not shown any tendency to fall and consequently there was no fall in cost of labour or materials.

Tirunelveli.—Famine relief works were sanctioned by the Government in Koilpatti, Sankarankoil, Tiruchendur and Nanguneri taluks to provide employment to agricultural labourers and weavers thrown out of employment. In other taluks the conditions were normal.

Coimbatore.—There was no change in 1954-55. The 10 per cent cut given in the schedule of rates was continued to be in force.

Erode.—The conditions prevailed in 1953-54 changed in 1954-55 since the famine conditions also changed due to fairly good rains in the latter half of 1954-55. Also due to irrigation facilities afforded by Lower Bhavani Project agriculture has been the major source of employment of labour in Erode, Gobichettipalayam and Dharapuram taluks. Hence cost of labour and materials increased and difficulty in securing labour was also experienced.

Nilgiris.—There was no appreciable fluctuation in rates of 1954-55. There was also no scarcity of labour during the year.

(e) *Traffic Census.*

As agreed to in the Central Annual Conference of the Superintending Engineers (Highways) held at Kodaikanal in 1951 that the traffic census should be taken once in three years, census was taken during 1954-55 after 1951-52.

During the year under review, census was recorded for a week in all the divisions on all State roads and on all important district board roads and municipal roads both during normal load and peak load periods.

The traffic census statistics pertaining to the years 1951-52 and 1954-55 are under compilation and will be got printed shortly.

The census statistics has enabled the department to take over additional stretches of approximately 338 miles of roads under its control, and black topping them wherever necessary.

(f) *Tools and Plant.*

I. (a) *General—Indexing system for plant and machinery.*—To ensure prompt supply of plant to the various places according to their priority and to effect proper distribution of the plant between various divisions and to have a complete control of the plant and machinery and track-mover their indexing system which was introduced from 1st March 1953 was continued to be maintained and found to be more successful as the benefits derived are multifold. Not only prompt supply and proper distribution are ensured but also the system enables to take quick action in getting the plants repaired quickly in Transport and Machinery Workshops and to fully engage the plants. Many officers of other departments and firms have come to see this system for adoption as it is working very successfully. It is also proposed to extend the Kardex system to control the movements of the plant by the Superintending Engineers (Highways) within the circles and is under active consideration of this department in view of its successful operation in Chief Engineer's (Highways) office.

(b) *Purchase of plant and machinery.*—During the year under review, sanction for the purchase of plant and machinery to the tune of Rs. 1.52 lakhs were obtained for use on road and bridge works of this department. The following are the important items for which orders were placed during the year.

- (1) Water jetting equipment—One number.
- (2) Suction and delivery hoses and couplings to be fitted with water tanks.
- (3) Compression testing machine of 150 tons capacity—One number.
- (4) Calyx drills—Four numbers.
- (5) Small boat without board motor for Coleroon bridge works and other bridge works—One number.
- (6) Willy's jeeps with trailers for West Coast Divisions—Four numbers.

(c) *Purchase and distribution of stores.*—Stores like spares for plant and machinery are kept in this department under "Stock" in three places, viz., in Transport and Machinery Stores, Madras; Transport and Machinery Workshops, Pudukkottai and Transport and Machinery Repair yard at Coimbatore. The value of stock held in all these three places during the year under review was Rs. 9 lakhs. The introduction of an efficient system of purchase of stores

and stock-keeping was under contemplation. Under this system, no piecemeal and local purchases are to be made and enough stocks 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 distributed among three workshops of this department at Madras, Pudukkottai and Coimbatore as stock-keeping centres. Certain frequently required items of spares like tyres, tubes, etc., are to be further distributed and kept in the various divisions, to have spares within the easy reach of the plant located in the divisions to facilitate prompt replacement.

(d) *Verification of stores.*—The stock verification subdivision formed during 1953 has completed the first cycle of verification of stores during the year in the three centres, viz., Madras, Pudukkottai and Coimbatore. The system of verification of the stores by an independent officer other than the one who is in charge of the stores proved to be successful as the discrepancies noted are reported to higher authorities to settle discrepancies and fixing responsibility.

(e) *Other activities.*—This department took keen interest in the All-India Khadi, Swadeshi and Industrial Exhibition held at Teynampet at Madras during the year under review. This is the first time this department took part in an exhibition. Many distinguished visitors from all over India who were then at Madras in connection with the All-India Congress Session held at Avadi visited the stalls of this department. The Exhibition was a grand success even though this department entered in such activities for the first time. Many of the public had a chance to see some of the road-making machinery that were assembled in Exhibition and got an idea how the important roads are formed and bridges constructed.

II. *Transport and Machinery Organization.*—The main aim of this Transport and Machinery Division, Madras, is to take major and minor repairs to plant, machinery and distribution of fresh items of machinery and stores. In addition to this, manufacture of certain equipments and plants were also done. This division has manufactured equipments like tar boilers, hand operated drum mixers, plate bearings and roller bearings for bridge works. Conversion of transport lorries into water lorries with necessary attachments, etc., were also done in this division.

The Transport and Machinery Subdivisions at Coimbatore and Pudukkottai were under the control of the respective Superintending Engineers (Highways) and were also continued to attend to major and minor repairs of the plant of the respective circles to which they are attached.

The proposals of equipping these three repair yards to a uniform standard with tools and machinery for carrying out all major and minor repairs was under consideration of Government.

The name and number of plant in each category available in this Department as on 1st April 1954 and 31st March 1955 is furnished below:—

List of plant as on 1st April 1954 and 31st March 1955.

	On 1st April 1954.	On 31st March 1955.
1 Asphalt mixers	11	11
2 Bitumen boilers	71	208
3 Boat	Nil	Nil

List of plant as on 1st April 1954 and on 31st March 1955—cont.

	On 1st April 1954.	On 31st March 1955.
4 Breakdown lorry	3	33
5 Stone crusher	4	4
6 Compressor	23	23
7 Concrete mixer	72	72
8 Calyx core drill	4	4
9 Concrete mixer	1	1
10 Bull dozer	4	4
11 Dodge Tipper lorry	3	3
12 T-Nailor	2	6
13 Grader	13	13
14 Generator	7	7
15 Hand pump	32	32
16 Jeep	28	32
17 Lorry	121	121
18 Laboratory van	1	1
19 Pile driving set	3	3
20 Power pump	78	78
21 Roller	420	420
22 Seamen mixer	1	1
23 Sheep-foot roller	1	1
24 Screed vibrator	25	25
25 Tractor	4	4
26 Trench roller	4	4
27 Tipping truck	28	28
28 Immersion vibrator	6	6
29 Welding set	6	6
30 Hand drum mixer	718	718
31 Power winch	2	2
32 Crane	2	2
33 Core cutting machine	1	1
34 Water cart	244	244
35 Hand winch	24	24
36 Hand-boring set	11	11
37 Hydraulic jack	Nil	6
38 Hydraulic pump	Nil	3
39 Water jetting equipment	Nil	Nil
40 Gun-netting set	1	1
41 Barrow mixer	62	62
42 Tram line	13Flg.	13Flg.
43 Tracto tanker	1	1
44 Grab	2	2

(g) Contracts.

Statistics showing contracts awarded for Government and District Board works during 1954-55 under different classification are given below :—

Classification. (1)	Government Roads.		District Board Roads.	
	Number. (2)	Cost. (3)	Number. (4)	Cost. (5)
		RS.		RS.
Maintenance Works	2,055	1,33,63,860	2,722	81,64,164
Surfacing Works	452	60,23,497	74	8,29,254
Bridges, culverts and causeways.	180	45,82,692	106	18,52,712

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

(h) Claims and Disputes.

There were certain claims put up by the contractors during the year 1954-55 of which some were disposed and the remaining cases were pending as detailed below :—

Name of division. (1)	Name of contractor. (2)	Nature and details of claim. (3)
Nagapattinam	G. Ramachandran Naidu.	Dispute over selling rates for the work of cement concreting Vijaya-puram Bazaar St. to Netaji road which was referred to the S.E., P.W.D. Tanjore, for arbitration.
Mangalore	1. P. R. Natarajan	A claim for the refund of Rs. 1,100 forfeited from the contractor for the slow progress of works was referred to the S.E. (H) for orders.
	2. Francis Gonsalves	An amount of Rs. 1,000 was claimed by the contractor for spreading consolidation and boulder packing for hair pin bends done in 1952-53. The matter was under correspondence.
	3. M. Sivarama Rao	For the slow progress of work in 1953-54 a sum of Rs. 200 was forfeited by the D.E. (H). The claim preferred by the contractor for refund was under correspondence.
Kozhikode Division	P. Krishnan	Claim to the extent of Rs. 852 towards extra lead for water for consolidation works was put up by the contractor and was referred to S.E. (H) for arbitration.
Palghat	R. Swaminathan	Claim by the contractor to the extent of Rs. 8,660 towards steining of wells, improvements to diversion road, etc., done in connection with construction of Panthavoor bridge on District Board road was referred to Superintending Engineer (Highways) for arbitration.

(i) Accidents.

During the year 1954-55, there were 8 accidents of which 5 proved fatal, two resulted in injuries and one in damages to a departmental lorry.

The following are the details of the accidents :—

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)
1 Chingleput ..	8 May 1954— Fatal.	Jabbar, the mechanic employed, in connection with the work of constructing a bridge across Palar met with fatal accident on 8th May 1954. The deceased got down the well 7-A in order to see the progress of work done on the blasting and removal of rock by the sinkers who had abandoned his work and gone away. Hardly had he got down about 15 or 20 feet, he threw off his diving helmet and without giving any signal tried to come out of the well. After coming out of the well he collapsed. He was taken to Government Hospital where he was found dead.	Rs. 1,500	..
2 Salem district, Krishnagiri Division.	25 Aug. 1954 —Injuries.	A gang mazdoor Sottayan, son of Konan, of Narasampathi while cutting the overhanging branches of the trees in Dowlatabad-Cuddalore road, fell down and sustained injuries resulting in a fracture in arm.	Under correspon- dence.	..
3 Tirunelveli ..	12 Dec. 1954 —Fatal.	The deceased, J. Rathinam, son of Joseph, Muthusamipuram, Sivalarpathi Post, was engaged by the contractor for spreading work on the road Kulathur District Frontier in M. 65/3. During spreading work in progress the deceased fell by accident before the stone roller, and effort made by other workmen who were also working with deceased for stopping the roller from moving was not successful as the roller was coming down on the steep slope of the road and the deceased was crushed by the stone roller on 12th December 1954.	The payment of Rs. 500 was made by the contractor to the party direct.	..
4 Malabar, Kozhikode Division.	2 Feb. 1955— Fatal and injuries.	At about 9 a.m., lorry MD.C. 3082 belonging to the contractors of the bridge works was returning to M. 66/7 of Cochin-Mysore Frontier road after loading metal at 62/2 of Cochin-Mysore Frontier road. Seven male mazdoors were taken with the lorry for loading and unloading. While the lorry was returning the driver observed another lorry coming in the opposite	Matter under correspon- dence.	..

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)
		direction and kept the lorry to the extreme left of the road for allowing the other lorry to pass as there was narrow culvert to be negotiated with. When the other lorry passed, the driver noted that two of the mazdoors who were standing in the lorry lost the balance and were thrown out of a lorry. One of them lost his life en route to hospital—Names. Mohamed, son of Bearen (fatal), Kesavan Nair (injury).	..	..
5 Transport and Machinery Division.	1 July 1954.	Departmental lorry Mack MSP 8649 was parked near Chingleput due to repairs to the self-starter. A private lorry MDY 1971 dashed against the rear of the Mack lorry at about 3 a.m. and pushed it to a distance of 59 feet from where it was parked and resulted in the left front wheel of Mack setting over the parapet adjoining an ahazhi. The estimated damage to the Mack lorry was Rs. 4,025. A suit was filed in the Chingleput District Court against the owner of the private lorry for the recovery of the cost of damages and the results are awaited.	..	..
6 Erode ..	14 July 1955 —Injury.	While the departmental jeep No. MSZ 622 was plying from M. 0/2 to 0/1 of Satyamangalam-Athani road, a woman by name Ramai was hit by the extreme right bumper of the jeep and was thrown away. The right leg of the victim was affected.	The ques- tion of payment of com- pensation was under conside- ration.	..
7 Tiruchirappalli.	14 February 1955—Fatal.	The departmental lorry MSC 8785 while proceeding along with the road from Tiruchirappalli to Pullambady hit a pedas trian who was walking in the middle of the road and proceeding towards Ariyalur. He died in about half an hour.	..	Further re- port was awaited.
8 Vellore ..	28 February 1955—Fatal.	A girl aged 9, who was neither employed by the department nor by the contractor, was killed under the wheels of the departmental road roller No. H.D. 21-050 (MDJ 1639). The Police treated this as accident.	..	Further re- port was awaited.

(j) Floods and monsoon damages.

There were several cases of interruption to traffic during the year 1954-55 in the districts of Malabar, South Kanara, North Arcot, Coimbatore, Tirunelveli, Tanjore, South Arcot, Chingleput and Madurai.

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

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

Serial number and name of district. (1)	Name of road or bridge. (2)	Month of occurrence. (3)	Remarks as to the cause of interruptions. (4)
1 South Kanara.	Bridge at M. 59/6 of Mani-Majara-bad road.	June 1954 ..	Due to fall of a big forest tree.
2 Do.	Culvert at M. 65/3 of Kalladka-Kanhangad road.	July 1954 ..	Heavy rain.
3 Do.	Kandlur-Hossangady road ..	August 1954 ..	Floods.
4 Malabar ..	Bridge at M. 14/8 of Taliparamba-Kottur road.	June 1954 ..	Central wooden beams broken.
5 Do. ..	Iritty-Irikkur road, M. 35/8 ..	July 1954 ..	Collapse of an old laterite arch culvert.
6 Coimbatore ..	Seventh Mile Anamalai Ghat road.	July 1954 ..	Road slip.
7 Do. ..	Erode-Satyamangalam road, M. 33/7.	August 1954 ..	Traffic blocked by back water of Bhavani.
8 North Arcot.	Katpadi-Venkatagirikota road, MDR M. 18/7-8 Gudiyattam Town limit.	July 1954 ..	Flood due to heavy rains.
9 Do.	Palar causeway 25/3 Arni-Tindivanam road.	October 1954 ..	Floods.
10 Do.	Pallikonda-Palamaner road, M. 0/7, 8, 1/1.	Do. ..	Do.
11 Do.	N.H.M. 72 Ranipet-Krishnagiri road, Wenlock causeway.	Do. ..	Do.
12 Do.	Katpadi-Venkatagirikota road, 18/7-8.	Do. ..	Do.
13 Do.	Ambur-Sathghur road, M. 0/7 ..	Do. ..	Do.
14 Tirunelveli ..	Palamcottah-Nagalapuram road, M. 36/6.	Do. ..	Do.
15 Do. ..	Vaipar causeway 50/6, Palamcottah-Nagalapuram road.	Do. ..	Do.
16 Do. ..	Sankarankoil-Naduvakkurichi road, M. 6 only (Major District Road).	Do. ..	Heavy rains.
17 Do. ..	9/4 Udayarpatty-Sivalaperi road (Major District Road).	November 1954.	Floods.
18 Do. ..	Gatana river at M. 6/7 of Ambasamudram-Tonkasi Road.	October 1954 ..	Do.
19 Do. ..	Sankarankoil-Tiruvengadam road, M. 7/1.	November 1954.	Submerged.
20 Do. ..	Gatana river M. 6/6 of Ambasamudram-Tenkasi road.	November and December 1954 and January 1955.	Floods.
21 Do. ..	Major District Road No. 50 at M. 36/3, 4, 6 Palamcottah-Nagalapuram road.	December 1954.	Heavy floods in the stream.
22 Tanjore ..	Tanjore-Nagapattinam road, M. 37/8.	October 1954 ..	Heavy rains.
23 Do. ..	Tiruturaiundi-Vedaranyam road, M. 35/6, Appakanar.	December 1954.	Floods.
24 Do. ..	Tiruvarur-Nagapattinam Highways road northern portion near municipal limit.	Do.	Do.

Serial number and name of district. (1)	Name of road or bridge. (2)	Month of occurrence. (3)	Remarks as to the cause of interruptions. (4)
25 Tanjore ..	Mayuram-Muthupet road, M. 49/2 57/8, Nagapattinam Division.	October 1954.	Floods.
26 Do. ..	16/1, Nagapattinam-Velanganni road.	Do.	Do.
27 South Arcot.	Cuddalore-Vridhachalam Diversion road.	15/3 Do.	Do.
28 Do.	State Highways Cuddalore-Chittoor road, 45th M. Pennar Causeway.	Do.	Do.
29 Do.	M. 11/5 at Mortandy-Tindivanam road.	Do.	Do.
30 Do.	Causeway at M. 104/3-5 of Madras-Tiruchirappalli-Dindigul road.	Do.	Do.
31 Do.	M. 113/4-7, Madras-Tiruchirappalli-Dindigul road and Ulundurpet-Salem road.	Do.	Do.
32 Do.	Cuddalore-Chidambaram road, M. 1/1-2.	Do.	Do.
33 Do.	Merkanam-Tindivanam road, M. 1/1 bridge.	Do.	Do.
34 Do.	Cuddalore-Tirukoilur Anicut road, M. 2/6.	Do.	Do.
35 Do.	State Highways Ulundurpet-Salem road, M. 43/6 and 49/4-5.	Do.	Do.
36 Do.	Cuddalore-Tirukkoyilur Anicut road, M. 8/3.	Do.	Heavy rain in Gudiyattam bridge.
37 Chingleput ..	At M. 51/1 Vandalur-Walajabad road.	Do.	Floods.
38 Do. ..	Palar causeway at M. 38/3-5 of Madras-Truchirappalli-Dindigul road.	Do.	Do.
39 Do. ..	Periapalayam causeway between M. 8/9 of Madras-Tiruttani road.	Do.	Do.
40 Do. ..	Vandalur-Walajabad road ..	Do.	Do.
41 Do. ..	Causeway at M. 11/7 of Kancheepuram-Wandiwash road.	Do.	Do.
42 Do. ..	Palar Road and causeway at 13/6 Uthiramerur road and 2/6 Kancheepuram-Wandiwash road.	Do.	Heavy rain and floods.
43 Do. ..	Causeway at M. 6/6 Tada-Varadapalayam road.	Do.	Do.
44 Do. ..	Tirukalikundram-Tirupporur road dam at M. 1/6.	December 1954.	Do.
45 Do. ..	Tirupporur-Mahabalipuram road, M. 30/3.	Do.	Do.
46 Madurai ..	Malakkal causeway at M. 11/7-8 Tirumangalam-Pallapatti road.	November 1954.	Due to scour under paving slabs.

(k) Avenues.

During the year, 82,800 plants on Government roads and 29,773 plants on district board road were newly planted. Out of these, 61,172 plants on Government roads and 18,105 plants on district board were survived.

Divisionwise particulars of numbers of trees planted, number survived, expenditure incurred and income derived are furnished in Annexure 26. An expenditure of Rs. 4,53,685 on Government roads and Rs. 1,12,886 on district

board roads was incurred during the year on the maintenance of avenues while the income realized on them was Rs. 7,44,404 and Rs. 3,33,164 on Government and district board roads respectively.

Analysis of figures in Annexure 26 indicates that there are only 82 trees per mile on Government roads and 27 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 a sum of Rs. 2,79,089 was realized towards revenue. Divisionwise particulars are given in Annexure 28.

(m) *Inspection bungalows.*

Twenty-one Inspection bungalows were in charge of the department. An expenditure of Rs. 14,210 was incurred on their maintenance while the income derived was Rs. 2,875. Details are furnished in Annexure 29 (ii).

(n) *Travellers' bungalows.*

One hundred and fifty-five travellers' bungalows and twenty-four rest-houses were maintained by the Department. A sum of Rs. 1,62,376 was incurred during the year on their maintenance and Rs. 45,013 was derived towards rents.

Details of Travellers' bungalows and rest-houses in each division, the expenditure incurred and income derived are given in Annexure 29 (iv).

(o) *Encroachments.*

Government roads.—11,627 numbers of encroachments were detected during the year, 4,583 numbers licensed, 4,784 numbers evicted and 5,193 objectionable and 13,152 numbers unobjectionable encroachments were pending disposal at the end of the year. Divisionwise details of encroachments in municipal and non-municipal areas are given in Annexure 27 (i).

District board roads.—Three thousand one hundred and nine cases were detected during the year, 1,627 numbers licensed, 1,245 numbers evicted, 1,001 numbers of objectionable and 472 unobjectionable cases were pending disposal at the end of the year, vide Annexure 27 (ii).

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

During the year 52 works at a total cost of Rs. 2,12,07,790 on Government roads and 64 works costing Rs. 14,95,880 on district board roads were approved by Government.

Divisionwise details showing the number of works approved during the year and those 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 sanctions accorded to the estimates, tenders accepted and agreements executed 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 sanctions to estimates, tenders dealt with and contracts approved are given in Annexure 19.

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 report for 1952-53 continued to function during the year under report.

2. An analysis of the items of objections raised as a result of audit of the accounts of the divisions and outstanding, unremedied at the end of 31st March 1955 is set forth below :—

Particulars.	Items over 3 years.		Items over 1 year and less than 3 years.		Items less than 1 year.	
	Items.	Amount.	Items.	Amount.	Items.	Amount.
		RS.		RS.		RS.
A. Want of estimate ..	12	1,60,066	55	2,10,86,352	245	5,43,174
B. Excess over estimate ..	139	13,92,868	365	22,78,681	425	7,37,988
C. Want of appropriation.	..	..	..	..	..	..
D. Excess over appropriation.	..	..	..	..	..	..
E. Want of vouchers and SRS due.	25	12,461	78	1,08,762	234	2,84,098
F. Miscellaneous irregularities.	..	..	..	..	18	39,352
	176	15,65,395	498	2,34,73,795	922	16,04,612

Total number of items of outstanding objections was 1,596 amounting to Rs. 2,66,43,802.

There is a decrease in the number of outstanding objections as compared with last year. The clearance of the objections was furnished by the issue of special letters to the officers concerned urging early regularization.

CHAPTER VIII.

COMMITTEES AND CONFERENCES.

(a) *The Board of Communications.*

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 would be held soon after the selection of the non-official members is completed.

(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 on the 16th and 17th June 1954 in P.W.D. Library Hall, Chepauk, Madras.

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.A.M.SOC.C.E., Chief Engineer (Highways).
- (2) Sri S. C. Nayak, M.I.E. (Ind.), Superintending Engineer (Highways), ex-Coimbatore Circle.
- (3) Sri M. N. Kamath, B.E., M.I.E. (Ind.), M.A.M.SOC.C.E., Superintending Engineer (Highways), Tiruchirappalli.
- (4) Sri T. S. Kethara Mudaliar, Deputy Chief Engineer (Highways).
- (5) Sri G. S. Gnanaprakasam, B.E., Divisional Engineer (Highways), Saidapet
- (6) Sri K. Ramaswami Reddy, B.E., A.M.A.M.SOC.C.E., Director of Research, Madras.
- (7) Sri K. Namasivayam, B.E., Divisional Engineer (Highways), Transport and Machinery Division.
- (8) Sri P. R. Golikere, B.E., Divisional Engineer (Highways), Designs.
- (9) Sri V. S. Ramachandran, B.A., Accounts Officer (Highways), Madras.

The following subjects were discussed :—

- (1) Review of the progress of the resolution passed at the last year's conference held at Madras on 21st May 1953 and 22nd May 1953.
- (2) Inadequacy and insufficiency of staff in Highways Division.
- (3) Deposit for District Board works.
- (4) Working of departmental lorries and necessity to retain the bare minimum of two at Divisional headquarters.
- (5) Hire charges for rollers.
- (6) Appointment for a third clerk for subdivision office.
- (7) Periodicals detailed quarterly progress report on road and bridge works.
- (8) Audit objections, S.I.Os. and P.S.I.Os.
- (9) Inspection report of the Accountant-General.
- (10) Strengthening section offices.
- (11) Distribution of annual maintenance grants for roads.
- (12) Monthly progress report and expenditure on road maintenance works in forms A, B and C revised form proposals.
- (13) Parking of lorries and rollers in the compound of 'Travellers' bungalows.

(c) Monthly conference.

During the year under report, only one conference was held on 23rd June 1954 in the chambers of the Minister for Works at the Secretariat.

The subjects discussed are—

- (1) First-grade for Divisional Engineers (Highways).
- (2) Purchase of jeeps to all Assistant Engineers (Highways).
- (3) Permitting full service for officers taken over to Highways Department for pension.

- (4) Printing of a Highway Quarterly Bulletin.
- (5) Travelling allowance—Special concession applied for.
- (6) Motor vehicles—Regional Transport authorities—Inclusion of Divisional Engineers (Highways) as members; and
- (7) Recruitment (direct)—War Service personnel recruitment—Madras Highways Engineer Service—Regarding—Regularization of.

CHAPTER IX.

EVENTS.

Indian Roads Congress.

During the year under review no session of the Indian Roads Congress was held.

A. Exhibition.

Participation of Highways Department in Congress Exhibition at Teynampet.—At the invitation of the reception committee of the 66th session of the Indian National Congress, the Department of Highways participated in the Congress Exhibition held at Teynampet, Madras, commencing from the 18th January 1955. The Government of Madras approved of an expenditure of Rs. 20,000 for the purpose and also sanctioned a staff consisting of one Assistant Engineer, four Junior Engineers, one Tracer and one Attender. The Highways Department has been participating in all the Technical Exhibitions held in connection with the Indian Roads Congress at various centres in India since 1950 displaying the exhibits of purely technical nature. But this exhibition for the first time, afforded an opportunity for presenting exhibits covering almost all the fields of activities of the Highways Department in a manner interesting to every visitor.

The Highways Department stall possessed the frontage of the most modern architectural features with a distinctive and picturesque attraction for the visitors. The inside wall space of the entire stall was decorated with various colourful paintings and sceneries which merged with the different exhibits and presented a natural and lively background for them.

The stall housed displays of the latest developments in the Highways Department with many unique and instructional features in the form of the following exhibits.

1. *Relief map of Madras State showing the bridges and roads.*—This model had three striped illuminated lines, the strips in each line indicating the road system in Madras State as in 1947, the road system in 1954 and the road system envisaged in 1964 with the lengths of different types of improved road system marked over them. The automatic illumination devices fitted to the surfaces marked over them. The model were suitably timed to bring the 3 stages of development in succession with the different surfacings suitably coloured. The bridges already completed and those in progress were represented in different colours as spotlights over the illuminated blue river courses.

2. *Models of stages of construction of (a) concrete roads, (b) blacktopped roads, and (c) Tuticorin-Tiruchendur road with stabilized soil base and (d) Ramnad-Mandapam road with soil cement base.*—These exhibits were made to scale with the true replica of the machineries and men in different forms of

Laying the foundation stone, the Chief Engineer dealt with, in his speech, the geographical position of the bridge and its importance. He stated that in the coastal belt area the river are wide and foundation conditions are not easy for the construction of bridges. Due to the heavy cost involved, the scheme for connecting Tuticorin to Cape Comorin via Tiruchendur and Kulasekharapattinam could not be taken up in the past. In the present context of food shortage, this region is becoming more important by its chief occupations, viz., fishing and production of salt in the coastal places to the port of Tuticorin has become a desiduation and this is now being provided by linking up Tiruchendur-Cape Comorin (via) Kulasekarapattinam, Anjigram, etc. The distance by this route from Comorin is 80 miles. Taking the route from Tuticorin to Cape Comorin, there are two unbridged crossings, one over Karamanar at Manapad and another over Tambaraparam at Mukkani. The bridge work at Manapad has been taken up at a cost of Rs. 2.2 lakhs and is in progress. By the construction of the bridge across Tambaraparam at Mukkani, the inter-coastal route from Tuticorin to Cape Comorin will have uninterrupted and all-weather communications.

Thambipettai bridge in mile 15/3 of Cuddalore-Vriddhachalam road.—Foundation stone for the bridge was laid by Sri K. K. Nambiar, B.A., M.I.E. (Ind.), F. INST. H.E. (Eng.) M.M.E. (Eng.), A.M.A.M.SOC.C.E., Chief Engineer (Highways), on 13th March 1955.

Laying the foundation stone for the bridge, the Chief Engineer stated about the importance of this bridge which is lying on the road leading to lignite mines in South Arcot district which is fast becoming a centre of All-India importance and also dealt with the several aspects of bridge construction in the past and the present. He also explained that transport by road is becoming essential in the present way of living and commercial transport are becoming bigger, heavier and faster exceeding the limits now laid down. Rapid industrialisation, electrification schemes and other developmental activities require heavy, large and indivisible loads to be moved on roads from cities and rail heads to new centres. It is not uncommon to see in the development of Neiveli mines, large low-loader vehicles carrying heavy equipments passing on these roads occasionally. Loads up to 80 and 100 tons are moved on these low-loaders. Vehicles of this kind have become the source of concern to us responsible for the highways and bridges and constitute a real problem whereby the existing structures are subjected to occasional loading heavier than the basic design loading. In the interest of economy and the general development of the State, the movement of such vehicles of abnormal loading cannot be unduly restricted. Their movement has therefore to be regulated and sometimes diverted on alternate safe routes resulting in extensive detours which, in turn, affects the ultimate cost of transport.

All load regulations and speed-limits are brought in to preserve the existing highway system, many sections of which were built long before such heavy traffic entered the picture. Road transport vehicles, buses and lorries, trucks and tractors are manufactured changing the model to meet the current needs each year. But pavements and bridges built for their economical life spans cannot be upgraded all at once. Bridges and culverts designed for lower limits are liable to be damaged or destroyed even though they possess several more years of economic life, unless traffic loads are properly regulated.

Modernization of these bridges was started some 10 years ago following the report of the Special Engineer for investigation of weak bridges. Still a large part of the work remains to be done, already widening and resurfacing to meet the current traffic demands take away sizeable chunks of our annual highway allotment, sign posts and warning signs are bristling all along the roads, cautioning to limit speed and imposing other restrictions indicative of the arrears in this regard. Sooner we take up the modernizing of these bridges, the better for the economic position of this country. The construction techniques have changed materially in recent years. The precast, prestressed or prefabricated structural units, manufactured under factory conditions can be moved and placed and poststressed and deck structure completed involving the closure of roadway to a limited duration. No doubt the work involved under this head of reconstruction of weak and narrow bridges is scattered over the State and sustained action has therefore to be taken, to plan, schedule and complete the works promptly and thus to contribute to the general economy in transport so vital to the development of this country.

With these forewards, the Chief Engineer (Highways), laid the foundation stone.

C. Opening ceremony.

1. *Bridge across the Swarnanadhi river at Puttige at mile 13/1 of Heriadka-Hebri road.*—This bridge was opened for traffic on 2nd June 1954 by Sri A. B. Shetty, Minister for Public Health.

This bridge, apart from its local and commercial importance, will provide an all-weather through route from Udipi to Mysore State connecting the famous Sri Krishna shrine at Udipi which attracts lakhs of pilgrims from all over the South and the Holy Sankarachariyar Mutt at Sringeri. This is of much use for the development of commerce by connecting the Mysore Plateau and the hinterland to the part of Malpe through this route. The bridge is a reinforced concrete structure with simply supported flanged T. beam decking and comprises 7 spans of 60 feet. The continuous T. beam girders as adopted for Pugalur were originally contemplated for the decking for this bridge, since it was considered that hard work will be available at shallow depths. In the course of execution it was noticed that the rock met with is not of the hard variety required and it was decided to have all the spans discontinuous. Incidentally the 60' 0" flanged T. beam decking adopted for this work happens to be the longest span of its type in the State. The total length of the bridge is 456 feet between faces of abutments. The bridge carries a clear roadway of 22' 0" between kerbs, and the structures of the bridge are designed to take up Indian Road Congress class AA heavy loading. The estimated cost of the bridge is Rs. 4 lakhs but the bridge work has actually cost Rs. 6.3 lakhs and has involved the use of about 660 tons of cement and 140 tons of steel. The work was commenced on 16th April 1951 and completed in May 1954.

2. *Bridge across Agniar at mile 6/4 of Pattukottai-Arantangi road.*—The bridge was opened for traffic on 8th August 1954 by Sri K. Kamaraj Nadar, Chief Minister.

The road from Pattukottai to Arantangi is an important Major District Road carrying heavy vehicular traffic and connecting the two taluk headquarters of Pattukottai and Arantangi in Tanjore district.

The bridge consists of 40 vents of 10 feet by 10 feet in 10 units of 4 cells each. The height of the road level above the average bed is about 7½ feet. This is a bridge of submersible type that will pass all the ordinary flood waters

under it. There might be an overflow of about 5 feet during extraordinary floods which comes to a cycle of 10 years or so and are of short duration and may not cause obstruction to traffic for any considerable period. The box culverts rest on and are rigidly connected to reinforced concrete caissons going down to 6 feet depth below site level. The roadway is 11 feet 3 inches above sill and is 22 feet between kerbs. The thickness of the piers as well as that of the deck slab is only 12 inches and offers minimum obstruction to flow. The side protection for the roadway consists of perforated kerbs 9 inches high (to allow for flow of water through when the bridge is submerged) with hand rails of reinforced cement concrete posts 3 feet high at 5 feet intervals and two horizontal rows of galvanized iron pipes. This is a new type of design evolved to ensure maximum economy consistent with strength, efficiency and durability and this is the first bridge of this reinforced concrete multibox type in this area. The structure is of an all concrete design involving no use of brick or stone masonry for piers or abutments. The roadway over the approaches consist of a sand cement base 12 inches thick stabilized with 8 per cent of cement with a granite metal coat of 4 inches at the top. The bridge is designed for two lanes of Indian Road Congress class 'A' loading. The bridge work was started in May 1952 and was completed in March 1954. The estimated cost of the work is Rs. 2,75,000 but the cost of the completed bridge is likely to exceed Rs. 3 lakhs due to certain additional improvements found necessary during execution.

3. *Bridge at mile 1/1 of Merkanam-Tindivanam-Gingee Road.*—The bridge was opened for traffic on 20th December 1954 by Sri M. Bhaktavatsalam, Minister for Agriculture.

Merkanam is an important centre for salt production. All the salt and other commodities produced in this coastal area had to be transported across the backwater to the marketing centres in the interior and hence this bridge is really the most important link in the life line of communications for these villages. Pending construction of this new bridge a ferry service was organized by means of a ramped cargo lighter to transport lorries, cars, bullock carts, etc. The bridge is an all concrete structure. The foundations are of simplex cast *in situ* reinforced concrete piles of 16 inches diameter. The decks of alternate spans cantilever beyond their supports to pick up suspended spans thus effecting economy of material spans 1, 3, 5 and 7 each contain a suspended span of 15 feet supported on cantilever arms of 12 feet 6". The thickness of the deck slab is 36 inches over the supports and 18 inches at centre. Reinforced concrete approach slabs 6 inches thick and 10 feet long are provided on either side of the bridge for relieving the surcharge effect on the back fill of the abutments. The wearing surface over the deck consists of 3 inches thick 1 : 1½ : 3 cement concrete. The parapets are of reinforced concrete construction.

The bridge has consumed about 330 tons of cement and 91 tons of steel. The estimated cost of the bridge is Rs. 2,75,000 but has actually cost about Rs. 2.90 lakhs.

4. *Causeways on Kancheepuram-Uttiramerur road across Palar and Cheyyar.*—The two causeways across Palar and Cheyyar on Kancheepuram-Uttiramerur road were thrown open for traffic on the 20th September 1954 by Sri Raja Sri Shanmugha Rajeswara Sethupathi, Minister for Public Works, 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., Chief Engineer (Highways) welcomed the Minister and other distinguished visitors participated in the functions. The Chief Engineer (Highways) in his address, stated that the foundation stones for these two causeways in mile 13/5 to 14/1 and mile 7/1-2 respectively of Kancheepuram-Uttiramerur road were laid in November 1951 by the then Minister for Public Works, Sri M. Bhaktavatsalam, under the Presidentship of Sri V. K. Ramaswamy Mudaliar. These works were sanctioned out of the State allocation of the Central Road Fund, and were the first to be inaugurated under the 120 lakhs scheme. Though the foundation laying ceremony was performed in November 1951, the works were actually sanctioned and entrusted for execution in November 1952 and March 1953 only.

At length the Chief Engineer (Highways) dealt with the geographical position of the causeways and their importance and said :

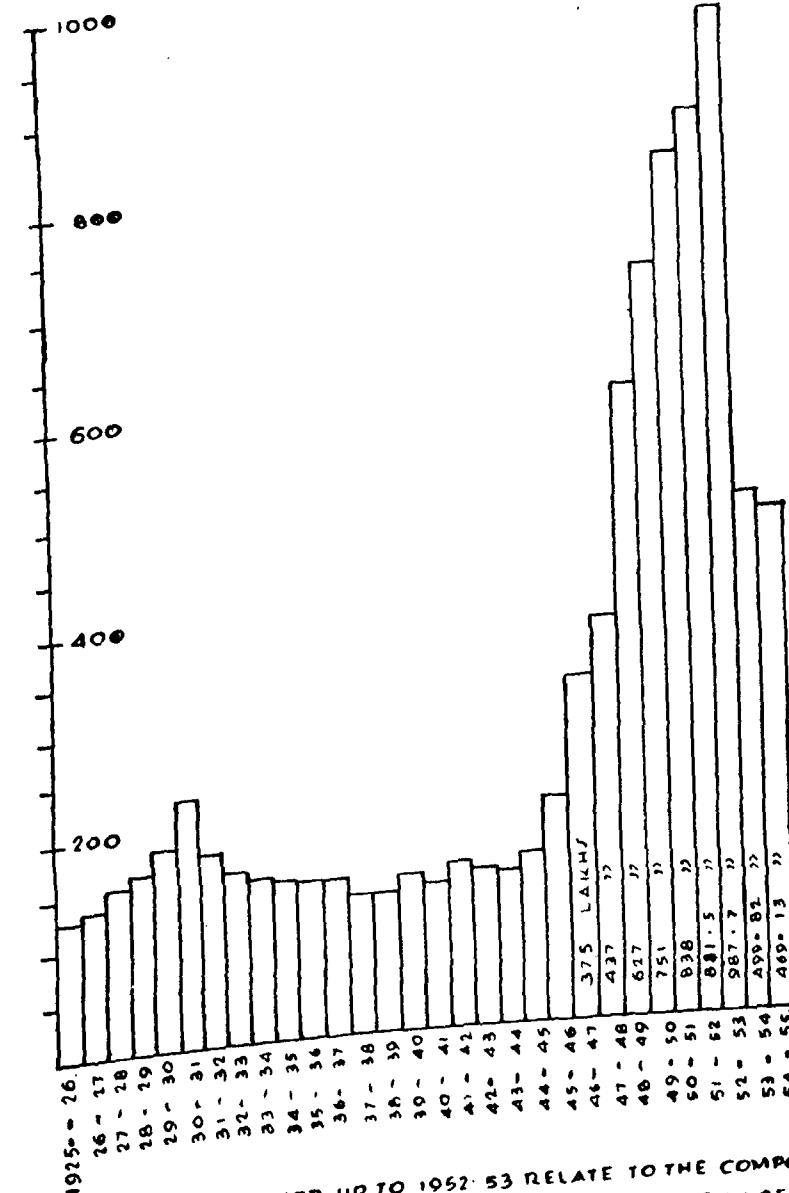
Palar river has a width of about 2,360 feet at the crossing. Owing to frequent floods in the river the traffic on this road used to be interrupted several times in the year. During ordinary flood conditions there might be only a depth of 1 foot to 2 feet water flowing in the river and during maximum flood conditions depth of water might be as much as 8 feet. The construction of a high level bridge at this spot would cost not less than 25 lakhs of rupees. As the amount available in the Central Road Fund allocations was very limited, and as several such schemes had to be taken up together, it was not possible to recommend the construction of a high level bridge at this site and only a causeway costing about 1.70 lakhs has been provided here. The crest level of the causeway having been kept at 4,200 feet which is about the ordinary flood level in the river, the interruption to traffic is minimized to a great extent. The high flood conditions are only few and far between and the interruption to traffic will be generally of short durations, perhaps lasting only for a day at a time. The causeway has a level portion of 2,120 feet and sloping portion aggregating to 240 feet on both sides. The road width over the causeway is 22 feet.

The causeway across Cheyyar situated in mile 7/1-2 is about 925 feet in length with sloping approaches of about 235 feet. In this horizontal portion there have been provided for about 495 feet length consisting of 11 units of multiple box culverts each having 4 cells of 10 feet by 10 feet. The cost of the causeway is only Rs. 2.36 lakhs as against 10 lakhs or so that would be required for putting up a high level bridge.

GROWTH OF ROADS

1846	3,100 MILES
1880-81	19,500 "
85-86	19,650 "
90-91	21,600 "
95-96	21,600 "
1900-01	23,800 "
1905-06	25,100 "
10-11	26,000 "
15-16	26,500 "
20-21	26,600 "
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 "
54-55	26,384 "

N.B. { THE FIGURES NOTED UP TO 1952-53 RELATE TO THE COMPOSITE STATE OF MADRAS & THAT OF 53-54 AND 54-55 ARE IN RESPECT OF RESIDUARY MADRAS STATE.

TOTAL ANNUAL EXPENDITURE
IN LAKHS OF R.

N.B. { THE FIGURES NOTED UP TO 1952-53 RELATE TO THE COMPOSITE STATE OF MADRAS AND THAT OF 53-54 & 54-55 ARE IN RESPECT OF RESIDUARY MADRAS STATE

ANNEXURE 1.

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,
 Year ending 31st March 1955

STATE.

STATE.

Maintained by Public Works Department or other Government Department.

Maintained by local bodies.

Type of road.

(1)

1. Bituminous—

(a) Surface dressed with tar, bitumen or asphalt hot or in form of cut backs or emulsion.

(b) Grittied, sheet asphalt or any base, asphaltic concrete or macadam, tar, concrete or macadam including carpoa one inch thick or more.

Concrete—

(a) Cement concrete

(b) Cement bound macadam ..

Water bound macadam—

(a) Broken rock metal

(b) Kankar, laterite or brick metal ..

Lower types—

(a) Using artificially admixed granular material, gravel, moorum, etc., on the natural soil.

(b) Natural soil, motorable in fair weather.

(c) Natural soil, unmotorable..

Total (all types) ..

Mileage.

Expenditure (Rupees in lakhs).

Mileage.

Expenditure (Rupees in lakhs).

As on 31st March 195 .

Change since last report plus or minus on column (2).

Total (columns 6) plus (7).

As on 31st March 195 .

Change since last report plus or minus on column (3).

Total (columns 8) plus (9).

New construction.

Maintenance.

Total (columns 11) plus (12).

Total mileage (columns 14) plus (10).

Total expenditure (columns 15) plus (13).

Unbridged mileage.

Remarks.

ADMINISTRATION REPORT OF THE

FORM No. 1.

Expenditure incurred on extra-municipal roads maintained by Public authorities during year ending 31st March 1954.
 ("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) RS.	Local body. (3) RS.	Total. (4) RS.
1. Maintenance, repairs and minor improvements.	27,069	8,447	35,516
2. New constructions and improvements debited to Original Works (includes improvements of surfaces except surface painting with tar or bitumen—first and subsequent treatment).	6,643	4,290	10,933
3. Administration and other expenses—			
(a) Establishment	2,511	977	3,488
(b) Tools and Plant	3,213	60	3,273
(c) Others (see note below)	..	..	..
Total (excluding loan charges) ..	39,436	13,774	53,210
4. Loan charges—			
Interest	..	..	..
Repayments (Principal or sinking fund) ..	..	..	..
Total (including loan charges) ..	..	..	..
Outstanding Highway DEBIT at the end of the financial year.	39,436	13,774	53,210
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.]	..	1,941	..

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 last March of the year following that to which the information relates, to—

FORM No. 2.

Sources of expenditure incurred on road works for the year ending 31st March 1954.

STATE.

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

Source of expenditure. (1)	Expenditure.		
	State. (2) RS.	Local body. (3) RS.	Total. (4) RS.
1. Central Road Fund	1,591	927	2,518
2. State Revenues	31,360	1,944	33,304
3. Local Funds	..	10,903	10,903
4. Loans	..	..	..
Any other source to be specified here ..	..	..	..
5. Government of India for Works as N.H. ..	6,485	..	..
Total ..	39,436	13,774	53,210

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, Shahjahan Road, New-Delhi.

HIGHWAYS DEPARTMENT, 1954-55

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	1,75,22,582 79,96,937	..
1947-48	37,034	2,55,19,519	609
1948-49	15,024 22,025	2,62,03,053 91,54,213	..
1949-50	37,049	3,53,57,266	954
1950-51	15,780 22,194	3,50,15,182 1,15,83,288	..
1951-52	37,974	4,65,98,470	1,227
1952-53	15,460 22,587	3,37,91,000 1,29,85,735	..
1953-54	38,047	4,67,76,735	1,229
1954-55	15,560 23,411	3,87,73,748 1,33,63,439	..
1955-56	38,971	5,21,37,187	1,339
1956-57	15,599 24,957	4,16,35,671 1,41,82,154	..
1957-58	40,556	5,58,17,825	1,376
1958-59	15,650 25,838	4,51,29,912 1,45,39,379	..
1959-60	41,488	5,96,69,291	1,438
1960-61	8,626 17,301	2,61,25,682 83,43,187	..
1961-62	25,927	3,44,68,869	1,326
1962-63	8,672 17,712	2,38,21,198 76,78,244	..
1963-64	26,384	3,14,99,442	1,194

NOTE.—The figures given up to and including 1952-53 are for the Composite State of Madras and those for the years 1953-54 and 1954-55 are in respect of the present (Residuary) Madras State.

ANNEXURE 3.

Classified cost of maintenance for the year 1954-55.

Classification.	Government roads.			District Board roads.		
	Mileage.	Maintenance expenditure.	Cost per mile.	Mileage.	Maintenance expenditure.	Cost per mile.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	MILES.	RS.	RS.	MILES.	RS.	RS.
National Highways ..	1,088	41,79,671	3,842	..	..	..
State Highways ..	1,665	50,80,480	3,057	..	..	..
Major District roads ..	5,828	1,43,71,322	2,466	3,826	31,98,793	962
Minor District roads ..	91	80,725	1,936	5,134	23,54,814	459
Village roads ..	..	..	..	9,252	21,24,677	230
Total ..	8,672	2,38,21,198	2,747	17,712	76,78,244	434

A.R.H.—5

ANNEXURE 4.

Statement showing the length of roads maintained during the year 1954-55 as on 31st March 1955.

Serial number. (1)	Name of division. (2)	Government roads.					District Board roads.				Public Works Department roads. (12)	Municipal roads. (13)	Grand total. (14)
		National Highways. (3)	State Highways. (4)	Major District Roads. (5)	Other District roads. (6)	Total. (7)	Major District Roads. (8)	Other District Roads. (9)	Village roads. (10)	Total. (11)			
Madras Circle.													
1	Chingleput	133	..	525	..	658	56	279	719	1,084	5	64	1,811
2	South Arcot	86	90	386	..	562	231	499	705	1,490	103	113	2,268
3	Nagapattinam	..	27	261	..	288	107	390	645	1,142	415	254	2,496
4	Tanjore	..	73	329	..	402	255	258	482	995			
5	North Arcot	104	73	474	5	656	128	457	401	946	1	180	1,823
6	Salem	80	92	239	9	390	165	354	291	819	..	156	2,680
7	Krishnagiri	122	..	298	2	422	253	336	322	911			
8	Madras City	..	..	..	..	..	..	..	..	..	3	544	544
Total ..		525	325	2,612	16	3,378	1,250	2,573	3,595	7,418	527	1,308	12,631
Tiruchirappalli Circle.													
9	Tiruchirappalli	131	190	459	..	780	237	540	1,034	1,811	71	215	2,877
10	Madurai	110	68	471	..	649	258	151	1,039	1,511	30	234	2,464
11	Ramanathapuram	117	71	307	..	495	264	332	471	1,087	..	215	1,777
12	Tirunelveli	85	97	276	..	458	409	183	413	1,115	18	163	1,759
13	Erode	28	57	406	7	498	252	392	951	1,595	53	258	4,001
14	Coimbatore	50	138	333	..	521	203	264	699	1,076			
15	Ootacamund	..	104	83	21	208	9	65	236	310	..	143	661
Total ..		521	725	2,335	28	3,609	1,722	1,930	4,813	8,495	157	1,278	13,539
West Coast Circle.													
16	Mangalore	..	277	396	27	700	109	256	423	791	..	67	1,558
17	Kozhikode	..	193	149	20	362	199							197	118
18	Palghat	42	145	436	..	623	13	173	273	494	16	197	2,206
Total ..		42	615	981	47	1,685	354	631	814	1,799	16	264	3,764
Special Divisions.													
19	Caleroon Bridge Division.	}	Special	}	Nil.								
20	Ponnalar Bridge Division.												
21	Mangalore Bridge Division.												
22	Kozhikode Bridge Division.												
23	Mangalore Bridge Division.												
Grand total ..		1,088	1,665	5,828	91	8,672	3,326	5,134	9,252	17,712	700	2,860	29,934

ANNEXURE 5.

Statement showing the various types of roads under different authorities as on 31st March 1955.

Serial number and name of circle and division.	Cement concrete roads.					Black-top roads.					Metalled roads.					Unmetalled roads.					
	Highways. (2)	District Board. (3)	Public Works Department. (4)	Municipal Council. (5)	Total. (6)	Highways. (7)	District Board. (8)	Public Works Department. (9)	Municipal Council. (10)	Total. (11)	Highways. (12)	District Board. (13)	Public Works Department. (14)	Municipalities. (15)	Total. (16)	Highways. (17)	District Board. (18)	Public Works Department. (19)	Municipalities. (20)	Total. (21)	Grand total. (22)
Madras Circle.																					
1. Chingleput ..	29	..	..	1	30	465	16	..	9	490	164	402	5	40	611	..	666	..	14	680	1,811
2. South Arcot ..	21	..	..	..	21	212	5	..	15	232	319	763	1	82	1,165	10	722	162	16	830	2,268
3. Nagapattinam ..	..	..	1	5	14	115	4	1	22	341	153	158	..	131	918	18	980	409	96	2,223	3,496
4. Tanjore ..	6	..	..	..	6	177	22	..	..	..	201	271	..	..	..	..	703	..	..	..	..
5. North Arcot ..	22	..	..	9	31	191	6	..	16	208	453	495	1	76	1,025	..	485	..	79	564	1,823
6. Salem ..	20	..	..	17	46	157	2	..	33	425	210	576	..	50	1,671	3	132	..	56	547	2,689
7. Krishnagiri ..	9	..	..	..	9	213	20	..	..	..	200	635	..	..	..	..	256	..	..	..	..
8. Madras City ..	..	..	..	20	20	..	..	2	431	433	..	..	1	76	77	..	..	..	14	14	544
Total ..	109	..	1	52	162	1,52	75	3	526	2,124	1,700	3,300	12	455	5,467	48	4,044	511	275	4,878	1,2631
Tiruchirappalli Circle.																					
9. Tiruchirappalli ..	16	..	..	10	26	377	9	..	72	453	387	990	16	71	1,464	..	812	55	62	99	2,877
10. Madurai ..	27	..	..	7	34	366	54	..	75	495	230	627	11	95	964	26	839	9	106	971	2,464
11. Ramanathapuram ..	16	..	..	20	36	231	28	..	12	321	198	379	..	103	680	..	660	..	80	740	1,777
12. Tirunelveli ..	14	1	..	49	64	184	63	1	9	257	260	855	..	55	1,204	..	176	8	50	23	1,759
13. Coimbatore ..	51	..	..	8	59	249	5	7	63	527	222	413	41	119	1,845	..	658	5	63	1,570	4,001
14. Erode ..	..	..	..	..	3	180	19	..	63	262	28	191	..	61	283	..	41	..	16	114	662
15. Ootacamund ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	57	..	..	..	..
Total ..	124	1	1	97	222	1,829	184	8	299	2,320	1,631	4,232	72	505	6,440	26	4,078	77	377	4,558	13,540
West Coast Circle.																					
16. Mangalore ..	..	..	..	1	1	161	1	..	19	184	522	401	..	44	967	14	389	..	8	406	1,558
17. Kozhikode ..	..	..	..	4	16	170	1	1	16	286	445	305	15	80	1,388	..	231	..	97	516	2,206
18. Palghat ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	188	..	..	..	..
Total ..	..	..	..	5	17	432	2	1	36	470	1,227	99	15	124	2,355	14	408	..	100	922	3,764
Grand total ..	245	1	1	154	401	3,781	261	12	860	4,914	4,558	8,521	90	1,084	14,262	88	8,930	583	752	10,358	29,934

ANNEXURE 6.

Statement showing the lengths of different classes of roads improved or newly formed during the year 1954-55.

Serial number and name of division.	Cement concrete roads.					Black-top roads.					Metalled roads.					Unmetalled roads.					Grand total.
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
Madras Circle.																					
1 Chingleput	..	..	..	..	..	32	1	..	3	36	..	29	..	2	31	..	49	..	..	76	
2 South Arcot	..	..	..	..	..	9	4	..	6	19	..	21	..	1	28	..	2	..	..	49	
3 Nagapattinam	..	..	..	..	..	59	3	..	6	98	..	6	..	10	19	..	2	..	..	96	
4 Tanjore	..	..	..	4	4	30	4	..	1	53	..	8	..	2	8	..	1	..	..	8	
5 North Arcot	..	..	..	..	..	48	4	..	2	92	..	14	..	2	17	..	8	..	..	65	
6 Salem	..	..	..	..	..	41	9	..	9	9	..	1	..	7	7	..	..	..	..	117	
7 Krishnagiri	..	..	..	..	..	40	..	..	..	..	..	..	..	..	..	..	..	..	..	26	
8 Madras City	..	..	..	..	..	..	21	..	27	307	..	80	..	24	110	..	69	..	10	500	
Total	..	..	..	4	4	258	62	..	23	463	..	144	5	11	164	..	180	..	11	327	
Tiruchirappalli Circle.																					
1 Tiruchirappalli	..	..	..	4	4	49	16	..	3	52	..	10	..	4	14	..	38	..	..	118	
2 Madurai	..	..	..	..	..	92	5	..	2	116	..	45	..	1	51	..	14	..	2	243	
3 Ramanathapuram	..	..	..	1	1	77	84	..	2	84	..	29	..	1	29	..	29	..	..	143	
4 Tirunelveli	..	..	..	3	3	47	6	..	3	85	..	58	..	1	59	..	35	..	..	182	
5 Erode	..	..	..	..	..	75	..	..	4	115	..	3	..	4	7	..	..	..	4	127	
6 Coimbatore	..	..	..	1	1	30	1	..	8	11	..	..	..	1	4	..	..	..	..	19	
7 Ootacamund	..	..	..	..	..	2	..	..	..	..	..	8	..	..	..	..	..	..	..	4	
Total	..	..	..	9	9	372	62	..	23	463	..	144	5	11	164	..	180	..	11	327	
West Coast Circle.																					
1 Mangalore	..	..	..	..	..	55	1	..	6	62	..	3	..	..	..	..	18	..	..	80	
2 Kozhikode	..	..	..	..	..	19	1	..	1	79	..	273	3	3	285	..	..	..	..	304	
3 Palghat	..	..	..	..	..	58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total	..	..	..	..	..	132	2	..	7	141	..	8	3	3	285	..	18	..	..	444	
Grand total	..	..	..	13	13	763	85	..	62	911	..	9	8	8	559	..	267	..	21	1,771	

NOTE.—* Ten miles of roads represent the lengths newly formed and metalled during the year.
† Forty-five miles include a length of 28 miles of roads newly formed and metalled during the year.
‡ Four miles of roads were taken during the year 1954-55 by District Board.

ANNEXURE 7.

(i) Statement showing the length of roads taken over from the District Boards and Municipalities during the year 1954-55.

Serial number and Name of division.		Cement concrete and black top roads.	Metalled roads.			Unmetalled roads.	Total length.			Authority for tak- ing over and remarks.
(1)	(2)		M.	F.	FT.	(4)	M.	F.	FT.	(6)
1 Chingleput	--	..	0	0	366	..	0	0	366	G.O. Ms. No. 1322, Public Works, dated 12th April 1955.
2 Cuddalore	..	..	1	5	619	..	1	5	619	Do.
3 Tanjore	..	..	1	4	0	..	1	4	0	Do.
4 Tiruchirappalli	..	..	5	5	220	..	5	5	220	Do.
5 Ramanathapuram.	..	..	9	1	0	..	9	1	0	Do.
6 Mangalore	..	..	5	6	410	5 0 0	10	6	410	Do. and G.O. Ms. No. 4442, Public Works, dated 17th December 1954.
7 Kozhikode	..	--	..	..	..	2 0 49	2	0	49	Government Mem- orandum No. 67378, A, 53- 28, dated 12th March 1954, and G.O. No. 4442, Public Works, dated 17th Decem- ber 1954.
8 Palghat	..	..	16	6	20	..	16	6	20	G.O. Ms. No. 3515, Public Works, dated 9th October 1954.
9 Other divisions	..	..	Nil.			..	..			..
Total	--	..	..			..	47 5 364			..

(ii) Length of roads transferred from the District Boards to Panchayats during the year 1954-55.

1 Kozhikode	..	..	..	6	7	567	..	6	7	567	..	6	7	567	..	6	7	567	..	Transferred to Panchayat Board as per District Board Resolution No. 3,786, dated 30th September 1954 and District Board Resolution Nos. 5, 9, and 12, dated 28th December 1954.
2 Palghat	..	..	..	1	5	0	..	1	5	0	..	1	5	0	..	1	5	0	..	D. Dis. No. 24789-52, dated 30th June 1953 of the President, District Board, Malabar.

NOTE.—A length of M. 2-F. 1-Ft. 422 of roads temporarily transferred to the Public Works Department (Irrigation) for the period of execution of the Malampuzha Project was retransferred to the District Board, Malabar (Palghat Highways Division), during the year 1954-55 with reference to G.O. Ms. No. 655, P.W., dated 12th February 1955.

ANNEXURE 8.

Road mileage analysis as on 31st March 1955 Government and district Board roads.

Classification.	(Mileage to the nearest mile.)									
	Cement concrete roads.		Blacktop roads.		Metalled roads.		Unmetalled roads.		Total.	
	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
1 National Highways	33	67	147	695	..	145	..	..	180	907
2 State Highways	26	83	77	807	8	659	..	8	111	1,557
3 Major District roads	9	22	129	2,119	20	6,491	..	366	158	8,995
4 Other district roads	..	..	6	50	..	3,393	..	1,774	0	5,217
5 Village roads	..	..	..	20	..	2,364	..	8,898	..	9,252
Total	68	178	359	3,682	28	13,052	..	9,016	455	25,928

ANNEXURE 9.

Statement showing in abstract appropriation and expenditure during 1954-55 under all heads of Civil Works (Highways only).

Finance heads.	Original appropriation.	Final appropriation.	Actual expenditure.
(1)	(2)	(3)	(4)
RS.	RS.	RS.	RS.
50. Civil Works—State Ordinary areas—Works and Repairs.	..	..	..
Development Schemes—			
Schemes included in the five-year plan	..	30,97,960	23,30,400
Other Development Schemes	..	..	52,500
Ordinary Areas—			
Other than Development Schemes	..	1,68,42,400	2,11,26,400
Total, Works and Repairs	..	1,99,40,360	2,35,09,300
Ordinary Establishment—			
Development Schemes—			
(i) Schemes included in the Five-Year Plan	..	1,47,300	1,70,800
(ii) Other Development Schemes	..	75,000	71,000
Other than Development Schemes	..	28,18,700	37,08,500
Total, Ordinary Establishment	..	30,41,000	40,10,300
Tools and Plant—			
Development Schemes—			
(i) Schemes included in the Five-Year Plan	..	11,15,500	..
(ii) Other Development Schemes	..	..	..
Other than Development Schemes	..	27,12,100	29,50,100
Total, Tools and Plant	..	38,27,600	29,50,100
Suspense—			
Ordinary Areas	..	10,06,800	11,61,700
Total Suspense	..	10,06,800	11,61,700
Union—			
50. Civil Works—Union Works and Repairs	..	40,00,000	42,00,000
51. Capital Outlay—Union—Works	..	45,00,000	35,48,800
Total—Highways—State and Union	..	..	2,69,75,800

ANNEXURE 10.

Statement showing the appropriation and the outlay during the year 1954-55 under 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.
Civil Works—State—						
Ordinary Areas—						
Development Schemes—						
(i) Schemes included in the Five-Year Plan—						
Communications	23,30,400	23,01,625	..	..	23,30,400	23,01,625
Establishment	..	..	..	..	1,76,800	1,70,800
Tools and Plant	..	..	..	..	..	6,85,978
(ii) Other Development Schemes—						
Communications	52,500	55,088	..	..	52,500	55,088
Establishment	..	..	..	..	71,000	1,06,237
Tools and Plant	..	..	..	..	..	..
Total, Development Schemes	..	..	..	..	26,80,700	19,47,868
Ordinary Areas—						
Other than Development Schemes—						
Communications	13,90,000	12,50,517	1,97,35,500	2,03,61,320	2,11,26,400	2,17,12,337
Establishment	..	..	..	..	30,84,500	31,95,404*
Tools and Plant	..	..	..	..	29,50,100	28,02,225
Total, Ordinary Areas	..	..	..	..	2,78,45,000	2,82,40,880
Suspense	..	..	..	..	11,61,700	10,23,970
Grand total	..	..	..	..	2,71,61,000	2,77,69,966
50. Union (Madras)—Civil Works—						
Communications	..	..	42,00,000	42,00,082	42,00,000	42,00,082
Total	..	..	..	..	42,00,000	42,00,082
51. Civil Works—						
Communications	35,48,800	36,11,444 @	..	..	35,48,800	36,11,444
Total	..	..	..	..	35,48,800	36,11,444

* Total establishment charges Recoveries an account of Establishment 37,25,818 } Rs. 31,95,404
 @ The amount of Rs. 36,11,444 includes Rs. 2,14,360 being the amount adjusted in the accounts of 1954-55 in respect of the work "road cum rail bridge over the Mahe river" executed by the Railway Department.

ANNEXURE II.

(i) Statement showing the division-wise particulars of Expenditure on Government Roads (State and Union), 1954-55.

Serial number, name of circle and division.	Expenditure on original works.																Tools and plant.	Total.
	50. Civil works—b. Communications.				5. Civil works—h. Development schemes.													
	National Highways.		Other District roads.		Major District roads.		State Highways.		Other District roads.		National Highways.		State Highways.		Other District roads.			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)		
Madras Circle.																		
1 Chingleput ..	317	..	..	3,15,865	..	8,20,187	..	96,288	..	5,81,930	..	15,05,145	..	62,297	1,02,642	35,83,972		
2 Cuddalore ..	..	59,972	..	2,78,602	..	..	3,403	2,75,729	..	2,61,382	..	8,60,801	14,739	41,742	1,14,552	20,15,025		
3 Nagapattinam ..	..	..	..	978	..	..	..	..	..	..	..	9,65,163	..	8,143	63,916	11,91,442		
4 Tanjore ..	..	..	..	477	..	..	10,704	1,06,886	370	..	..	2,47,374	9,62,705	52,526	77,754	14,88,354		
5 Vellore ..	1,923	3,485	..	12,755	..	2,266	742	95,860	..	2,14,042	2,45,505	8,27,238	7,850	64,837	1,13,324	15,88,543		
6 Coimbatore Division.	..	..	..	..	..	..	..	2,50,969	..	..	..	..	..	..	254	2,51,223		
7 Pondicherry Division.	..	..	..	..	..	45,723	..	..	..	..	..	..	..	..	821	46,544		
8 Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	63,667	63,667		
9 Salem ..	..	..	192	1,048	..	4,30,271	(-)	1,682	6,558	..	2,87,951	2,55,416	4,53,039	9,253	2,114,631	15,90,500		
10 Krishnagiri ..	..	..	..	6,904	..	8,294	..	..	..	..	4,98,739	5,63,406	9,333	20,165	84,077	11,90,932		
Total ..	2,240	84,281	..	6,17,830	..	13,15,741	4,371	8,26,304	370	18,44,044	10,07,505	62,30,700	93,706	2,37,524	7,36,738	1,30,10,453		
Tamil Nadu Circle.																		
11 Tiruchirappalli ..	..	1,56,507	..	16,638	..	3,25,323	..	81,981	..	4,94,633	5,01,319	8,91,243	20,546	50,105	2,00,152	27,25,296		
12 Madurai ..	..	..	..	38,732	..	3,42,302	7,320	30,980	..	4,52,540	1,89,278	11,77,937	..	4,811	2,86,964	24,11,384		
13 Ramanathapuram ..	..	2,024	..	40,240	..	3,53,431	..	..	..	3,91,392	2,33,143	9,44,781	..	25,396	1,23,587	20,93,615		
14 Tirunelveli ..	..	13,512	..	6,862	..	49,906	..	43,611	..	2,72,325	3,41,119	5,08,440	19,806	7,569	1,23,234	13,83,896		
Total ..	..	1,68,771	..	99,401	454	14,82,587	43,178	1,64,127	..	19,57,069	20,82,260	57,32,723	58,231	2,00,980	9,63,488	1,29,39,318		
West Coast Circle, Cannanore.																		
15 Mangalore ..	..	28,363	..	92,709	..	..	..	5,24,742	2,15,801	..	6,79,592	10,51,531	23,293	2,209	1,48,929	27,87,249		
16 Kozhikode ..	..	..	..	2,66,160	..	..	..	4,10,476	71,768	..	7,75,905	4,09,322	..	980	1,10,15	43,788		
17 Palghat ..	..	..	..	(-)	..	..	..	..	52,220	..	3,78,558	5,64,218	5,435	6,103	1,33,047	20,33,292		
18 Special Division Mangalore.	..	..	..	..	..	..	..	15,738	..	..	..	..	..	..	11,395	27,133		
19 Bridges Special Division, Mangalore.	..	..	..	..	..	..	..	..	6,049	..	..	..	..	..	2,306	8,955		
20 Special Division, Kozhikode.	..	..	..	..	..	..	..	11,098	..	..	..	..	..	..	5,209	16,307		
Total ..	..	36,883	..	8,50,129	..	..	..	9,62,040	3,46,528	..	3,78,558	20,16,715	28,728	9,292	4,16,042	68,46,124		
Grand total ..	2,240	2,89,935	454	10,60,869	..	27,98,328	10,10,089	13,30,959	370	41,79,716	50,89,480	1,43,71,322	1,80,725	4,53,835	21,16,268	3,24,96,495		

* Expenditure on the maintenance of upper class and sludge.

ANNEXURE II—cont.

(ii) Statement showing the division-wise expenditure in District Board roads and non-road works.

Expenditure on original works—Road works.																	
Serial number, name of Circle and division.	50. Civil Works—b. Communications.																
	Schemes.																
	Major district roads.			Other district roads.			Village roads.			Major district roads.			Other district roads.			Village roads.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	RS.	RS.	RS.		
Madras Circle.																	
1 Chingleput	626	3,02,907	86,191	2,579	7,072	17,576	49,381	1,02,831	2,36,199	3,675	50,486	9,00,213					
2 Cuddalore	42,438	49,463	2,55,641	1,332	73,335	40,409	3,22,343	1,93,783	1,83,343	17,739	1,83,767	13,70,958					
3 Nagapattinam	1,142	5,914	24,636	10,712	27,094	39,632	1,27,500	1,32,019	84,450	5,497	1,31,866	6,44,542					
4 Tanjore	12,629	2,815	30,986	1,111	16,538	29,117	2,11,389	1,20,092	53,360	4,669	1,90,897	6,61,953					
5 Vellore	18,000	179	30,601	2,851	15,616	73,135	39,434	2,00,351	97,923	13,157	1,14,232	6,96,835					
6 Salem	43,063	83,204	..	..	..	86,617	1,05,044	1,43,038	65,257	7,422	78,297	6,17,022					
7 Krishnagiri	40,087	55,673	14,040	..	..	12,619	2,03,573	1,33,063	47,272	1,843	44,929	5,58,111					
8 Coleroon Bridge Division ..	..	..	..	..	..	..	..	..	..	..	..	..					
9 Ponniar Bridge Division ..	..	..	..	..	..	..	..	..	..	..	..	..					
10 Transport and Machinery ..	..	..	..	..	..	..	..	..	..	..	..	..					
11 Design Division	..	..	..	..	..	..	..	..	..	..	..	..					
Total ..	1,57,985	5,00,160	4,92,135	25,105	1,40,055	2,30,935	11,05,006	10,35,232	7,88,010	54,057	3,32,404	54,21,034					
Tiruchirappalli Circle.																	
12 Tiruchirappalli	..	..	1,49,643	..	..	61,304	2,10,361	3,27,592	3,01,769	27,937	1,65,596	12,44,132					
13 Madurai	..	..	3,60,260	..	..	1,35,973	3,93,146	1,56,303	2,68,417	..	2,43,092	15,62,206					
14 Ramanathapuram	2,85,960	2,50,239	99,625	33,483	71,107	47,259	3,14,183	1,63,958	78,665	15,709	43,793	13,73,381					
15 Tirunelveli	4,97,015	4,773	1,09,692	16,124	7,914	29,118	5,03,657	43,743	1,19,937	6,843	64,768	13,43,934					
16 Coimbatore	4,056	6,569	18,911	..	15,935	92,615	1,49,118	1,13,692	2,09,230	1,178	2,27,742	7,72,147					
17 Erode	11,539	7,880	6,516	11,840	..	14,229	2,76,222	2,21,816	1,82,303	5,541	1,38,248	9,26,134					
18 Ootacamund.. ..	..	12,471	4,191	1,475	24,089	..	18,228	39,177	50,286	..	18,126	1,80,443					
Total ..	7,38,570	2,51,932	7,48,538	62,922	1,19,095	8,20,504	13,70,414	10,66,286	12,08,737	57,208	9,51,365	73,90,571					
West Coast Circle, Cannanore.																	
19 Mangalore	..	..	5,45	..	..	46,535	52,353	85,834	72,057	..	1,48,839	4,11,708					
20 Kozhikode	98,687	12,166	38,060	..	..	55,933	1,14,716	63,061	15,081	415	66,360	4,62,979					
21 Palghat	41	6,410	74,074	..	..	13,414	55,359	1,04,410	45,752	1,206	98,133	3,98,790					
22 Special Division Mangalore.	..	..	..	..	..	..	..	..	..	..	..	..					
23 Special Division, Kozhikode.	..	..	..	..	..	..	..	..	..	..	..	..					
24 Bridge Division Mangalore.	..	..	..	..	..	..	..	..	..	..	..	..					
Total ..	98,723	18,576	1,15,279	..	..	1,15,982	2,23,373	2,53,296	1,32,830	1,621	3,13,832	12,73,477					
Grand total ..	9,95,233	7,70,668	13,55,952	88,027	2,59,150	7,27,321	31,93,793	23,54,814	21,24,637	1,12,896	20,97,601	1,40,55,132					
												(+) 16,753					
												1,41,01,885					

NOTE.—The figures at (+) represent expenditure on tools and plant.

ANNEXURE

(iii) Statement showing the progress achieved on roads other than National Planning Commission

11-cont.

ghways during the year 1954-55 under the First Five-Year plan of the
(h. Development Scheme).

Other roads (District Board roads).

Serial number and name of division.	State Highways (Government Roads).									
	Cement concreting.		Black-top surfacing.		New formation (including cost of acquisition and widening of existing roads).		Metalling.		Major bridges.	
	Quantity	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.
	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Chingleput	..	..	..	..	..	..	..	..	..	..
2 South Arcot	..	..	..	0.10	..	0.14	..	..	..	..
3 North Arcot	..	..	..	..	..	..	5 0	(-) 0.39	..	0.87
4 Tiruchirappalli ..	..	..	..	..	..	0.08	..	..	..	..
5 Tanjore, East	..	..	..	..	..	..	..	..	..	0.92
6 Tanjore, West	1 0	0.10	..	..	..	..	..	..	1	0.79
7 Coimbatore	..	..	..	..	..	..	..	..	..	..
8 Madurai	..	0.232	..	..	..	..	..	..	1	1.00
9 Ramanathapuram ..	..	..	..	..	..	..	..	..	1	1.33
10 Tirunelveli	..	..	..	..	..	..	..	..	..	..
11 Salem, North	..	..	..	..	..	..	..	..	..	..
12 Salem, South	..	0.03	..	0.01	..	0.01	..	0.04	4	0.43
13 Coimbatore, North ..	..	..	..	..	..	..	..	..	..	..
14 Coimbatore, South ..	0 1	0.05	..	..	..	0.11	..	..	..	..
15 The Nilgiris	..	..	..	..	..	..	..	..	..	..
16 Malabar, North	..	..	..	..	2 5	2.76	..	..	..	..
17 Malabar, South	..	..	..	..	..	..	..	..	1	0.47
* South Kanara	..	..	1 0	0.038	..	..	..	..	1	0.50
Total	1 1	0.382	1 0	0.148	3 5	3.05	0 0	0.43	23	9.27

road, dams and other improvements strengthening and widening.		New formation (including cost of acquisition and widening of roads).		Metalling.		Major bridges.		Minor bridges, culverts, roads, dams, and other improvements like strengthening and widening, etc.		Expenditure incurred on all works (District Board works only) for the year.		Final grant drawn by District Boards for the year.	
Quantity.		Quantity.		Quantity.		Quantity.		Quantity.		Amount.		Amount.	
No.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	M. F.	RS. IN LAKHS.	No.	RS. IN LAKHS.	No.	RS. IN LAKHS.	RS. IN LAKHS.	RS. IN LAKHS.	RS. IN LAKHS.	RS. IN LAKHS.
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
..	..	9 2	0.20	1 0	0.07	1	0.02	..	..	0.29	0.34	..	..
3	2.23	..	0.40	..	0.04	1	0.64	..	0.04 } 0.03 }	1.15	0.54	..	..
..	..	2 3	0.79	..	..	1	0.17	..	..	0.96	0.93	..	..
..	..	2 0	0.35 } 0.15 }	..	..	..	..	18	0.113	0.613	1.03	..	..
..	..	..	0.04	..	0.12	1	0.19	3	0.32	0.87 }	0.56 }	..	..
..	..	..	0.28	..	0.11	..	..	..	..	0.37 }	0.33 }	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	1.698	1 4	0.21	..	..	..	..	1.908	0.86	..	..
..	..	0 6	1.35	..	..	..	0.14	..	0.03	1.52	1.02	..	..
..	..	..	0.27	..	..	7	0.25	3	0.02	0.54	0.46	..	..
..	..	..	0.093	..	..	..	..	..	..	0.093	0.09	..	..
..	0.008	..	0.10	..	..	7	0.56	..	..	0.66	1.14	..	..
7	0.024	..	0.13	..	0.17	..	..	..	0.02	0.32	0.13	..	..
2	0.05	..	0.35	..	..	..	..	4	0.20	0.55	0.33	..	..
..	..	0 4	0.056	..	..	..	0.312	..	..	0.368	0.24	..	..
1	1.368	..	0.237	3 3	0.10	..	..	..	0.22	0.557	0.69	..	..
1	0.003	3 4	0.37	..	..	2	0.007	..	..	0.077	0.34	..	..
20	4.080	..	0.13	..	..	..	..	..	..	0.13	0.39	..	..
34	7.802	18 3	6.674	5 7	0.82	20	2.289	28	0.993	10 7.6	9.42	..	..

ANNEXURE 12.

Statement showing the figures under "XXXIX—Civil Works—Rents and Miscellaneous, 1954-55—Highways only".

Heads of accounts.	Actuals. RS.
XXXIX. Civil Works—	
State—Rents	8,486
Miscellaneous—	
Contribution towards leave salary of officers lent to foreign service.	2,127
Other receipts	3,12,719
Total	3,23,312

N.B.—(1) The figures include treasury transactions also.
(2) (a) "Rents" represents recoveries of rent for occupation of Inspection Bungalows and resident buildings.
(b) "Other receipts" includes rent for lease of land and road margins, value of stores found surplus; cess 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.

Serial number and name of division and categories of roads.	Government.				District board.			
	Capital works.		Repairs.	Total.	Capital works.		Repairs.	Total.
	50. Civil Works—b. Communications.	50. Civil Works—h. Development schemes.			50. Civil Works—b. Communications.	50. Civil Works—h. Development schemes.		
	(Ex-P.W.R.)	(P.W.R.)			(Ex-P.W.R.)	(P.W.R.)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
I. Chingleput—								
National Highways ..	317	8,29,137	5,81,930	14,11,434	..	..	..	..
State Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	3,15,815	98,236	15,95,118	29,07,599	678	2,579	49,041	52,294
Other District Roads ..	..	..	..	..	3,02,907	7,072	1,02,431	1,12,811
Village Roads ..	..	..	..	..	86,141	17,576	2,56,190	3,59,907
Total ..	3,16,132	9,25,177	21,77,178	34,11,403	3,89,741	27,227	1,08,111	4,25,079
II. Cuddalore—								
National Highways ..	..	..	2,61,382	2,61,382	..	..	..	..
State Highways ..	59,972	(-) 3,403	1,09,768	1,69,337	..	..	..	..
Major District Roads ..	2,73,682	2,75,720	8,69,891	14,19,273	42,438	1,852	9,22,848	9,67,138
Other District Roads ..	..	..	14,739	14,739	49,168	73,385	1,03,783	1,26,336
Village Roads ..	..	..	..	..	2,55,641	40,909	1,83,513	2,99,063
Total ..	3,33,634	2,72,317	12,52,780	18,58,731	8,47,547	1,16,146	7,05,160	9,69,833
III. Nazapattinam—								
National Highways ..	..	..	1,52,442	1,52,442	..	..	..	..
State Highways ..	..	..	9,63,163	9,63,163	1,142	16,712	1,27,580	1,45,434
Major District Roads ..	973	..	..	..	5,914	27,094	1,32,919	1,65,927
Other District Roads ..	..	..	..	..	21,686	39,732	84,450	1,45,868
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	973	..	11,20,605	11,21,578	31,742	83,438	3,44,059	4,59,239
IV. Tanjore—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	21,316	10,704	2,47,374	2,79,394	..	..	..	..
Major District Roads ..	477	1,60,886	9,62,615	10,63,978	12,829	1,111	2,11,380	2,25,129
Other District Roads ..	..	370	57,526	58,286	2,115	14,884	1,20,002	1,36,999
Village Roads ..	..	..	..	..	30,986	20,117	57,380	1,08,483
Total ..	21,793	1,11,960	12,62,515	13,96,258	46,430	38,111	3,84,841	4,69,382

ANNEXURE 13—cont.

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

Serial number and name of division and categories of roads.	Government.				District board.			
	Capital works.		Repairs.	Total.	Capital works.		Repairs.	Total.
	50. Civil Works—b. Communications.	50. Civil Works—h. Development schemes.			50. Civil Works—b. Communications.	50. Civil Works—h. Development schemes.		
	(Ex-P.W.R.)	(P.W.R.)			(Ex-P.W.R.)	(P.W.R.)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
V. Tiruchirappalli—								
National Highways ..	..	3,25,228	4,84,683	8,09,911	..	..	..	..
State Highways ..	1,56,507	..	5,01,219	6,57,726	..	..	..	..
Major District Roads ..	16,632	81,181	8,91,243	9,89,056	..	..	2,10,861	2,10,861
Other District Roads ..	..	..	20,546	20,546	..	..	3,27,592	3,27,592
Village Roads ..	..	..	..	..	1,49,043	61,304	3,01,799	5,12,146
Total ..	1,73,139	4,07,209	18,97,691	24,78,039	1,49,043	61,304	8,40,262	10,50,597
VI. Madurai—								
National Highways ..	..	3,42,802	4,52,540	7,95,342	..	..	..	..
State Highways ..	..	7,320	1,89,278	1,96,598	..	..	..	..
Major District Roads ..	38,732	30,980	11,77,957	12,47,669	..	..	3,98,145	3,98,145
Other District Roads ..	..	..	..	..	..	..	1,50,308	1,50,308
Village Roads ..	..	..	..	..	3,60,260	1,35,978	2,63,417	7,64,655
Total ..	38,732	3,81,102	18,19,775	22,39,609	3,60,260	1,35,978	8,22,870	13,19,108
VII. Ramanathapuram—								
National Highways ..	..	3,35,881	3,92,392	7,28,273	..	..	..	..
State Highways ..	(-) 9,024	..	2,33,143	2,31,119	..	..	..	..
Major District Roads ..	40,290	..	9,44,781	9,85,071	2,85,960	33,483	3,14,183	6,33,626
Other District Roads ..	..	..	..	..	2,20,210	71,107	1,63,958	4,55,304
Village Roads ..	..	..	..	..	99,625	47,250	78,665	2,25,540
Total ..	38,266	3,35,881	15,70,316	19,44,463	6,05,824	1,51,849	5,56,806	13,14,479
VIII. Tirunelveli—								
National Highways ..	..	49,906	2,72,325	3,22,231	..	..	..	..
State Highways ..	13,512	..	3,41,119	3,54,631	..	..	..	..
Major District Roads ..	6,862	43,611	5,93,449	6,43,922	4,37,015	10,124	5,03,657	9,56,796
Other District Roads ..	..	..	19,806	19,806	4,773	7,914	43,743	56,430
Village Roads ..	..	..	..	..	1,09,992	29,118	1,19,987	2,59,097
Total ..	20,374	93,517	11,35,952	12,52,843	5,51,780	53,156	6,67,387	12,72,323
IX. Vellore—								
National Highways ..	1,923	2,266	2,14,042	2,18,231	..	..	..	..
State Highways ..	3,485	(-) 742	2,45,505	2,48,248	..	..	..	..
Major District Roads ..	12,755	95,860	8,27,238	9,35,853	18,000	2,851	80,484	1,01,335
Other District Roads ..	..	..	7,850	7,850	179	15,616	2,00,351	2,16,146
Village Roads ..	..	..	..	..	80,601	73,445	97,929	2,51,965
Total ..	18,163	97,384	12,94,635	14,10,182	98,780	91,902	3,78,764	5,69,446
X. Salem—								
National Highways ..	..	4,30,271	2,87,951	7,18,222	..	..	..	..
State Highways ..	(-) 492	(-) 1,688	2,55,416	2,53,236	..	..	..	..
Major District Roads ..	6,638	6,583	4,53,039	4,66,260	43,063	..	1,05,044	1,48,107
Other District Roads ..	..	..	9,253	9,253	83,204	..	1,48,088	2,31,292
Village Roads ..	..	..	..	..	..	86,647	65,257	1,51,904
Total ..	6,146	4,35,166	10,05,659	14,46,971	1,26,267	86,647	3,18,389	5,31,303

* Expenditure in the maintenance of upper Odai and sluice.

ANNEXURE 13—cont.

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

Serial number and name of division and categories of roads.	Government.				District board.			
	Capital works.		Repairs.	Total.	Capital works.		Repairs.	Total.
	50. Civil works—b. (b) Communi- cations.	50. Civil work—h. Deve- lopment schemes.			50. Civil works—b. Communi- cat. ons.	50. Civil works—h. Deve- lopment schemes.		
	(Ex-P.W.R.)	(P.W.R.)			(Ex-P.W.R.)	(P.W.R.)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
XI. Krishnagiri—								
National Highways ..	..	8,294	4,98,739	5,07,033	..	..	..	..
State Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	6,964	..	5,63,406	5,70,370	40,087	..	2,09,575	2,48,662
Other District Roads ..	..	..	9,338	9,338	55,673	..	1,33,068	1,88,741
Village Roads ..	..	..	..	..	14,040	12,619	47,272	73,931
Total ..	6,964	8,294	10,71,483	10,86,741	1,04,800	12,619	3,88,915	5,11,334
XII. Erode—								
National Highways ..	..	4,18,461	1,79,916	5,93,377	..	..	..	..
State Highways ..	776	745	2,09,052	2,10,573	..	..	..	..
Major District Roads ..	3,220	1,559	12,08,883	12,13,662	11,539	11,840	2,76,222	2,99,601
Other District Roads ..	..	..	4,600	4,600	7,880	..	2,21,816	2,29,696
Village Roads ..	..	..	..	..	6,516	14,229	1,82,308	2,03,048
Total ..	3,996	4,15,65	16,02,451	20,22,212	25,935	26,669	6,80,341	7,32,345
XIII. Coimbatore—								
National Highways ..	..	15,309	1,75,213	1,90,522	..	..	..	..
State Highways ..	..	34,979	4,25,019	4,60,028	..	..	..	..
Major District Roads ..	(-) 6,335	5,996	8,67,441	8,67,102	4,056	..	1,49,118	1,53,174
Other District Roads ..	..	..	1,686	1,686	6,569	15,985	1,13,602	1,36,206
Village Roads ..	..	..	..	..	18,911	52,616	2,0,280	2,53,807
Total ..	(-) 6,335	56,284	14,60,309	15,19,338	29,536	48,601	4,65,090	5,43,227
XIV. Ootacamund—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	..	134	1,63,409	1,63,534	..	..	..	..
Major District Roads ..	..	..	1,36,716	1,36,716	..	1,475	18,228	19,703
Other District Roads ..	454	..	11,653	12,107	12,471	24,089	39,177	75,787
Village Roads ..	..	..	..	..	4,191	..	50,286	54,477
Total ..	454	134	3,11,769	3,12,357	16,662	25,564	1,07,691	1,49,917
XV. Palghat—								
National Highways ..	..	..	3,78,558	3,78,558	..	..	..	..
State Highways ..	9,509	(-) 14	5,64,218	5,73,713	..	..	..	..
Major District Roads ..	(-) 8,740	52,220	9,37,956	9,81,436	41	..	55,539	55,580
Other District Roads ..	..	..	5,435	5,435	6,410	..	1,04,401	1,10,811
Village Roads ..	..	..	..	..	74,074	18,414	45,752	1,33,240
Total ..	769	52,206	18,84,167	19,39,142	80,525	18,414	2,05,692	2,99,631
XVI. Kozhikode—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	(-) 979	4,10,476	7,75,995	11,85,402	..	..	..	..
Major District Roads ..	2,66,160	71,768	4,09,322	7,47,250	98,687	..	1,14,714	2,13,403
Other District Roads ..	..	..	..	..	12,166	..	63,061	75,227
Village Roads ..	..	..	..	..	86,060	55,933	15,081	1,07,074
Total ..	2,65,181	4,82,244	11,85,227	19,32,652	1,48,913	55,933	1,92,855	3,95,704

ANNEXURE 13—cont.

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

Serial number and name of division and categories of roads.	Government.				District board.			
	Capital works.		Repairs.	Total.	Capital works.		Repairs.	Total.
	50. Civil works—b. (b) Communi- cations.	50. Civil works—h. Deve- lopment schemes.			50. Civil works—b. (b) Communi- cations.	50. Civil works—h. Deve- lopment schemes.		
	(Ex-P.W.R.)	(P.W.R.)			(Ex-P.W.R.)	(P.W.R.)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
XVII. Mangalore—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	28,353	5,24,742	6,79,592	12,32,687	..	..	945	945
Major District Roads ..	92,709	2,15,891	10,51,531	13,60,131	..	..	52,353	52,353
Other District Roads ..	..	..	23,293	23,293	..	..	85,834	85,834
Village Roads ..	..	..	..	..	..	5,145	46,535	72,057
Total ..	1,21,062	7,40,633	17,54,416	26,16,111	..	5,145	2,11,189	2,62,869
XVIII. Coleroon Bridge Division—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	..	2,50,969	..	2,50,969	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	2,50,969	..	2,50,969	..	..	..	..
XIX. Transport and Machinery Division—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	..	..	..	..	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
XX. Special Division, Kozhikode—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	..	11,098	..	11,098	..	..	..	..
Major District Roads ..	..	..	..	..	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	11,098	..	11,098	..	..	..	..
XXI. Special Division, Mangalore—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	..	15,738	..	15,738	..	..	..	..
Major District Roads ..	..	..	..	..	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	15,738	..	15,738	..	..	..	..
XXII. Bridges Special Division, Mangalore—								
National Highways ..	..	..	..	..	..	..	..	..
State Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	..	6,649	..	6,649	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	6,649	..	6,649	..	..	..	..
XXIII. Ponnai Bridge Division, Villupuram—								
National Highways ..	..	45,723	..	45,723	..	..	..	..
State Highways ..	..	..	..	..	..	..	..	..
Major District Roads ..	..	..	..	..	..	..	..	..
Other District Roads ..	..	..	..	..	..	..	..	..
Village Roads ..	..	..	..	..	..	..	..	..
Total ..	..	45,723	..	45,723	..	..	..	..

ANNEXURE 13 (i).
Statement showing the total expenditure incurred on each category of roads under Government and District Boards in respect of Original and Repairs Works.

Serial number, name of circle and division.	National Highways.			State Highways.		
	(1)	Government.		(3)	District Board.	
		(2)	RS.		(4)	RS.
Madras Circle.						
1 Chingleput	..	14,11,434	..	..	14,11,434	..
2 Cuddalore	..	2,61,382	..	..	2,61,382	..
3 Nagapattinam	..	..	..	..	..	..
4 Tanjore	..	2,18,231	..	..	2,18,231	..
5 Vellore	..	7,18,222	..	..	7,18,222	..
6 Salem	..	5,07,033	..	..	5,07,033	..
7 Krishnagiri	..	..	..	..	..	..
8 Coleroon Bridge Division	..	..	..	..	..	..
9 Transport and Machinery Division	..	..	..	..	..	..
10 Desgas Division	..	45,723	..	..	45,723	..
11 Ponnalar Bridge Division	..	31,62,025	..	..	31,62,025	..
Total						
Tiruchirappalli Circle.						
1 Tiruchirappalli	..	8,09,911	..	..	8,09,911	..
2 Madurai	..	7,95,342	..	..	7,95,342	..
3 Ramanathapuram	..	7,28,273	..	..	7,28,273	..
4 Tirunelveli	..	3,22,231	..	..	3,22,231	..
5 Erode	..	5,98,377	..	..	5,98,377	..
6 Coimbatore	..	1,90,522	..	..	1,90,522	..
7 Ootacamund	..	..	..	..	..	..
Total						
West Coast Circle, Cannanore.						
1 Mangalore	..	6,09,911	..	..	6,09,911	..
2 Kozhikode	..	7,95,342	..	..	7,95,342	..
3 Palghat	..	7,28,273	..	..	7,28,273	..
4 Special Division West Coast Roads, Mangalore	..	3,22,231	..	..	3,22,231	..
5 Do. Kozhikode	..	5,98,377	..	..	5,98,377	..
6 Do. Bridges (Mangalore)	..	1,90,522	..	..	1,90,522	..
Total						
Grand total						

ADMINISTRATION REPORT OF THE

Serial number, name of circle and division.	Major District Roads.			Other District Roads.			Village Roads.		
	(8)	Government.		(10)	District Board.		(12)	Government.	
		(9)	RS.		(11)	RS.		(13)	RS.
Madras Circle.									
1 Chingleput	..	20,07,899	..	20,59,885	..	4,12,810	..	4,12,810	..
2 Cuddalore	..	14,19,273	..	17,86,406	..	3,21,636	..	3,21,636	..
3 Nagapattinam	..	9,69,141	..	11,14,585	..	1,65,027	..	1,65,027	..
4 Tanjore	..	10,68,968	..	12,89,097	..	1,39,795	..	1,39,795	..
5 Vellore	..	9,35,853	..	10,37,188	..	2,16,146	..	2,16,146	..
6 Salem	..	4,66,200	..	6,14,867	..	2,31,292	..	2,31,292	..
7 Krishnagiri	..	6,70,370	..	2,48,062	..	1,88,741	..	1,88,741	..
8 Coleroon Bridge Division	..	2,50,969	..	2,50,969	..	..	..	..	..
9 Transport and Machinery Division	..	..	..	..	..	..	..	..	..
10 Desgas Division	..	..	..	..	..	..	..	..	..
11 Ponnalar Bridge Division	..	..	..	..	..	..	..	..	..
Total									
Tiruchirappalli Circle.									
12 Tiruchirappalli	..	9,89,856	..	12,00,717	..	3,27,592	..	3,27,592	..
13 Madurai	..	12,47,669	..	16,45,814	..	1,56,308	..	1,56,308	..
14 Ramanathapuram	..	9,85,071	..	16,18,697	..	4,55,304	..	4,55,304	..
15 Tirunelveli	..	5,56,175	..	15,12,971	..	56,430	..	56,430	..
16 Erode	..	12,18,662	..	15,13,263	..	2,29,696	..	2,29,696	..
17 Coimbatore	..	8,67,102	..	10,20,276	..	1,36,246	..	1,36,246	..
18 Ootacamund	..	1,36,716	..	1,56,419	..	75,737	..	75,737	..
Total									
West Coast Circle, Cannanore.									
19 Mangalore	..	13,60,131	..	14,12,494	..	86,834	..	86,834	..
20 Kozhikode	..	7,47,250	..	9,60,653	..	75,227	..	75,227	..
21 Palghat	..	10,11,296	..	10,66,376	..	1,10,811	..	1,10,811	..
22 Special Division West Coast Roads, Mangalore	..	..	..	..	..	..	..	..	..
23 Special Division West Coast Roads, Kozhikode	..	..	..	..	..	..	..	..	..
24 Special Division West Coast Roads, Bridges (Mangalore)	..	..	..	..	..	..	..	..	..
Total									
Grand total									

ANNEXURE 13 (ii).
Statement showing the Division-wise Expenditure and Lapses of Grant on Government Roads.

Serial number, name of circle and division.	Original works.			Maintenance works.		
	Final allotment.		Lapse.	Minimum allotment required for proper maintenance of road.		Lapses.
	(2)	(3)		(5)	(6)	
(1)	RS.	RS.	(4)	RS.	RS.	RS.
<i>Madras Circle.</i>						
1 Chingleput	12,42,800	12,41,655	2,145	20,98,600	23,30,456	21,77,378
2 Cuddalore	5,88,850	6,05,951	..	12,52,900	19,55,492	12,52,780
3 Nagapattinam	..	978	..	10,61,900	12,25,399	11,20,605
4 Tanjore	1,44,000	1,33,753	10,247	11,44,100	16,53,029	12,62,505
5 Krishnagiri	19,100	15,258	3,842	10,62,800	6,78,403	10,71,483
6 Salem	4,89,600	4,41,312	48,288	9,86,200	10,46,669	10,05,659
7 Vellore	1,39,600	1,15,547	24,053	13,55,700	16,33,846	12,94,635
8 Coleroon Bridge Division	1,29,000	2,50,969	..	..	..	..
9 Ponnaiar Bridge Division	43,000	45,723	..	..	..	..
10 Transport and Machinery Division	2,550	..	2,550	..	..	..
11 Designs Division	..	..	..	..	..	..
Total	27,99,500	28,51,146	..	89,62,200	1,05,23,294	91,85,045
<i>Tiruchirappalli Circle.</i>						
Tiruchirappalli	5,14,700	5,80,348	..	19,98,100	13,04,431	18,97,691
Madurai	4,26,700	4,19,834	6,866	17,82,200	17,22,078	18,19,775
Ramanathapuram	3,97,900	3,74,147	23,753	15,44,300	15,69,698	15,70,316
Tirunelveli	1,10,800	1,13,891	..	11,02,600	11,63,219	11,38,952
Coimbatore	34,400	49,949	..	14,63,000	15,05,075	14,69,389
Total	19,08,100	19,58,518	..	98,78,100	1,00,66,347	98,10,343
17 Erode	4,22,500	4,19,761	2,739	16,42,700	22,11,655	16,02,451
18 Ootacamund	1,100	588	512	3,45,200	5,90,191	3,11,769
Total	19,08,100	19,58,518	..	98,78,100	1,00,66,347	98,10,343
19 Mangalore	9,93,500	8,61,685	1,31,805	17,43,800	14,56,352	17,54,416
20 Kozhikode	7,49,200	7,47,425	1,775	11,51,100	20,92,276	11,85,227
21 Palghat	1,96,400	52,975	1,13,565	18,49,100	21,95,337	18,86,167
22 Special Division, West Coast Road, Mangalore	..	15,738	..	..	..	..
23 Special Division, West Coast Road, Kozhikode	..	11,098	..	..	..	..
24 Special Bridges Division, Mangalore	..	6,649	..	..	..	..
Total	19,39,100	16,95,580	2,13,660	47,44,000	57,43,965	48,25,810
P.W.D. Circles	66,46,700	64,95,244	1,51,456	2,38,43,400	2,63,33,606	2,38,21,198
Grand total	..	..	..	..	..	..

Statement showing the Division wise Lapses of Grant on District Board Roads.

Serial number and name of division.	Original works.			Maintenance works.		
	Final allotment.	Expenditure.	Lapse.	Final allotment.	Expenditure.	Lapse.
(1)	RS.	RS.	RS.	RS.	RS.	RS.
Madras Circle.						
1 Chingleput	4,19,747	4,16,941	2,806	3,83,560	Figures not available.	4,08,111
2 Cuddalore	5,22,920	4,63,693	59,227	8,34,370	Do.	7,05,169
3 Nagapattinam	1,45,000	1,15,180	..	3,57,900	Do.	3,44,059
4 Tanjore	2,38,165	84,546	1,53,619	7,33,907	Do.	3,84,841
5 Vellore	2,48,963	1,90,682	58,281	3,50,000	Do.	3,78,764
6 Salem	2,02,934	2,12,914	..	3,17,130	Do.	3,18,389
7 Krishnagiri	1,54,211	1,22,419	31,792	3,64,000	Do.	3,88,915
8 Coleroon Bridge Division	..	..	..	..	Do.	..
9 Ponnar Bridge Division	..	..	..	..	Do.	..
10 Transport and Machinery Division	..	..	..	..	Do.	..
11 Designs Division	..	..	..	..	Do.	..
Total	19,31,940	16,06,375	3,25,565	33,40,867	29,28,248	4,12,619
Tiruchirappalli Circle.						
12 Tiruchirappalli	2,31,850	2,10,347	21,503	7,00,000	Figures not available.	8,40,252
13 Madurai	4,31,000	4,96,238	..	9,75,000	Do.	8,22,870
Total	6,62,850	7,06,585	..	7,54,873	Do.	5,56,806
West Coast Circle, Cannanore.						
14 Irumvelvi	8,29,770	6,04,936	2,24,834	8,64,500	Do.	6,67,387
15 Coimbatore	3,91,839	78,137	3,13,702	5,33,022	Do.	4,65,090
16 Erode	24,996	52,004	..	7,71,000	Do.	6,80,341
17 Ootacamund	51,677	42,226	9,451	1,50,000	Do.	1,07,691
Total	26,93,128	22,41,561	4,51,567	47,48,395	41,40,437	6,07,958
West Coast Circle, Mangalore.						
18 Mangalore	9,56,400	51,680	9,04,720	2,50,000	Figures not available.	2,11,189
19 Kozhikode	2,34,740	2,02,846	31,894	3,87,730	Do.	1,92,858
20 Palghat	2,04,200	93,939	1,10,261	2,80,000	Do.	2,05,692
21 Special Division, West Coast Road, Mangalore.	..	..	..	..	..	..
22 Special Division, West Coast Road, Kozhikode.	..	..	..	..	..	..
23 Special Division Bridges, Mangalore	..	..	..	..	..	..
Total	13,95,340	3,48,465	10,46,875	9,17,730	6,09,739	3,07,991
Grand total	60,20,408	41,96,401	18,24,007	90,06,992	76,78,424	13,28,568

ADMINISTRATION REPORT OF THE

HIGHWAYS DEPARTMENT, 1954-55

ANNEXURE 14.
Financial Statement of all disbursements.

Serial number, name of circle and division.	Total works expenditure—Government and District Board.		Tools and Plant—Expenditure (New Supplies and Repairs).		Pay and Travelling Allowance of Establishment.			Percentage of establishment charges to works expenditure including Tools and Plant.		Contingencies.			Litigation.	Total.								
	(1)	(2)	(3)	RS.	(4)	RS.	(5)	RS.	(6)	RS.	(7)	RS.			(8)	RS.	(9)	RS.	(10)	RS.	(11)	RS.
		RS.																				
<i>Madras Circle.</i>																						
1 Krishnagiri	..	..	16,65,017	84,077	38,862	26,670	45,505	7.07	5,626	7,031	..	..	..	..	..	..	..	..	..	..	18,72,788	
2 Salem	..	..	20,92,891	1,14,631	50,195	49,897	20,152	5.99	3,660	8,434	..	..	..	..	..	..	..	..	..	..	23,39,860	
3 Vellore	..	..	21,71,904	1,13,524	62,970	37,097	29,236	6.40	5,074	11,963	..	..	..	..	..	..	..	..	..	..	24,31,777	
4 Saidapet	..	..	43,90,543	1,02,642	53,408	30,398	33,193	3.36	16,246	6,282	11,493	..	..	..	..	..	..	..	..	..	46,44,205	
5 Uddalore	..	..	32,70,831	1,14,552	1,07,607	67,530	31,065	6.69	5,514	14,736	360	..	..	..	..	..	..	..	..	..	36,12,195	
6 Tanjore	..	..	20,72,653	77,654	44,277	35,230	46,303	6.60	7,412	8,786	..	..	..	..	..	..	..	..	..	..	22,92,315	
7 Nagapattinam	..	..	17,34,268	64,916	20,031	33,855	46,193	6.26	4,396	8,237	..	..	..	..	..	..	..	..	..	..	19,11,896	
8 Coleroon Bridge Division	..	..	2,50,969	254	8,715	15,087	9,386	14.11	620	1,657	..	..	..	..	..	..	..	..	..	..	2,86,688	
9 Ponnar Bridge Division, Villupuram	..	..	45,723	821	3,643	1,271	856	13.61	210	355	..	..	..	..	..	..	..	..	..	..	52,879	
10 Transport and Machinery Division	..	..	..	63,667	40,873	27,764	1,951	..	22,951	3,752	..	..	..	..	..	..	..	..	..	..	1,60,958	
11 Designs Division	..	..	..	..	28,784	8,252	582	..	..	748	..	..	..	..	..	..	..	..	..	..	38,366	
12 Circle Office	..	..	..	..	16,496	43,002	8,242	..	910	4,807	..	..	..	..	..	..	..	..	..	..	73,457	
Total	..	..	1,76,94,799	7,36,738	4,75,880	3,76,053	2,72,664	6.97	72,619	76,788	11,853	..	..	..	..	..	..	..	..	..	1,97,17,394	
<i>Tiruchirappalli Circle.</i>																						
13 Tiruchirappalli	..	..	37,72,276	2,00,152	48,196	48,017	55,750	4.23	3,386	12,671	..	..	..	..	..	..	..	..	..	..	41,40,448	
14 Ramanathapuram	..	..	33,54,013	1,23,587	69,844	46,114	61,000	5.65	5,441	15,318	..	..	..	..	..	..	..	..	..	..	36,75,357	
15 Madurai	..	..	38,06,620	2,36,964	84,973	46,656	70,354	5.86	..	36,172	..	..	..	..	..	..	..	..	..	..	42,81,739	
16	..	..	23,00,381	1,35,177	74,685	33,841	67,602	7.73	5,903	6,289	..	..	..	..	..	..	..	..	..	..	26,23,873	
Total	..	..	1,93,83,154	9,63,488	4,39,591	2,99,958	4,99,850	6.72	26,139	1,02,909	..	..	..	..	..	..	..	..	..	..	2,17,15,089	
<i>West Coast Circle, Cannanore.</i>																						
21 Mangalore	..	..	30,30,023	1,48,929	81,332	76,347	31,477	6.61	8,596	12,148	..	..	..	..	..	..	..	..	..	..	33,89,357	
22 Special Division, West Coast roads, Mangalore	..	..	15,738	11,395	27,379	8,095	8,765	177.37	1,274	2,615	..	..	..	..	..	..	..	..	..	..	75,261	
23 Bridges Division, Mangalore	..	..	6,649	2,306	8,702	3,580	2,265	169.82	143	500	..	..	..	..	..	..	..	..	..	..	24,145	
24 Kozhikode	..	..	23,96,611	1,10,156	64,989	42,787	18,849	5.64	4,665	10,878	..	..	..	..	..	..	..	..	..	..	26,48,935	
25 Special Division, West Coast roads, Kozhikode	..	..	11,098	5,209	27,876	11,570	7,334	308.19	1,114	2,363	..	..	..	..	..	..	..	..	..	..	66,564	
26 Palghat	..	..	23,44,035	1,38,047	47,013	47,726	19,329	5.23	3,045	8,078	..	..	..	..	..	..	..	..	..	..	26,07,273	
27 Circle Office	..	..	..	..	7,935	9,425	4,182	..	634	3,143	..	..	..	..	..	..	..	..	..	..	25,319	
Total	..	..	78,04,159	4,16,042	2,65,226	2,00,930	92,201	7.58	19,471	39,725	..	..	..	..	..	..	..	..	..	..	88,36,854	
28 Office of the Chief Engineer (Highways)	..	..	..	..	1,15,593	1,93,149	12,298	..	..	22,452	..	..	..	..	..	..	..	..	..	..	3,43,492	
Grand total	..	..	4,48,82,112	21,16,268	12,96,290	10,69,190	8,77,013	7.70	1,18,229	2,41,874	11,853	..	..	..	..	..	..	..	..	..	5,06,12,829	

ANNEXURE 15.

Statement showing the works approved by Government under Post-War Road Development programme during and to end of the year 1954-55.

Serial number, name of circle and division.	Government Roads.				District Board Roads.			
	During the year.		To end of the year.		During the year.		To end of the year.	
	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RS.		RS.		RS.		RS.
<i>Madras Circle.</i>								
1 Chingleput	2	8,19,000	33	64,51,400	6	56,000	47	7,99,450
2 South Arcot	2	25,12,500	52	47,24,701	23	6,27,980	142	30,17,640
3 Nagapattinam, Tanjore	..	..	20	40,81,182	..	..	92	19,73,170
4 Vellore	3	22,52,000	37	64,09,875	..	..	135	15,70,430
6 Salem	1	5,59,500	55	73,93,010	..	..	131	15,21,170
7 Krishnagiri	1	1,71,000						
8 Transport and Machinery Division.	..	..	..	..	..	..	..	..
9 Designs Division	..	..	..	..	..	..	..	..
10 Coleroon Bridge Division	..	..	5	35,45,750	..	..	..	..
11 Ponnar Bridge Division	..	..	..	..	..	..	..	..
Total	9	63,14,000	202	3,26,05,918	29	6,83,980	547	88,81,860
<i>Tiruchirappalli Circle.</i>								
12 Tiruchirappalli	2	38,97,000	62	50,58,485	1	5,000	199	16,59,400
13 Madurai	4	7,89,100	85	23,11,000	..	..	114	17,88,940
14 Ramanathapuram	4	4,30,700	92	30,45,000	..	..	108	21,11,750
15 Tirunelveli	1	3,85,700	20	14,91,900	17	2,23,500	75	23,47,500
16 Erode	1	7,56,000	95	48,61,215	16	2,17,400	220	24,23,025
17 Coimbatore	12	12,57,900						
18 Ootacamund	2	4,500	15	27,33,560	..	..	24	4,10,050
Total	26	75,20,900	369	2,00,01,160	34	4,50,900	738	1,06,90,665
<i>West Coast Circle, Cannanore.</i>								
19 Mangalore	10	44,76,940	78	99,68,195	1	3,61,000	47	9,22,670
20 Kozhikode	3	13,71,950	44	47,22,670	..	..	69	13,20,571
21 Palghat	4	15,25,000						
22 Special Division, West Coast Road, Mangalore.*	..	..	..	..	..	..	..	..
23 Special Division, West Coast Road, Kozhikode.*	..	..	..	..	..	..	..	..
24 Bridges Special Division, Mangalore.*	..	..	..	..	..	..	..	..
Total	17	73,73,890	122	1,46,90,865	1	3,61,000	116	27,43,241
Grand Total	52	2,12,08,790	693	6,72,97,943	64	14,95,880	1,401	2,23,15,766

* Works sanctioned against special divisions are included in the respective territorial divisions.

ANNEXURE 16.
Statement showing the technical sanctions to estimates during the year 1954-55.
(i) Government Works.

Serial number and name of circle and division.	Original works.			Repairs.			Tools and Plant, New Supplies and Repairs.			Avenues.			Total cost.								
	Number of works for which estimates were sanctioned.	Cost.	Number of works.	Cost.	Number of works.	Cost.	Number of works.	Cost.	Number of works.	Cost.	Total number.										
												(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
													RS.								
(1)																					
1 Salem	3	5,80,300	165	18,51,518	36	1,49,625	2	1,250	206	25,83,693											
2 Krishnagiri	1	1,71,000	258	21,39,490	27	3,900	9	36,310	295	23,49,700											
3 Vellore	16	79,080	276	22,89,823	67	1,83,000	27	71,500	370	25,41,328											
4 Saidapet	5	2,040	279	22,02,397	58	1,30,059	18	19,276	261	11,41,700											
5 Nagapattinam	..	..	197	9,65,300	42	1,65,760	17	8,600	280	30,90,957											
6 Cuddalore	..	..	204	28,40,057	54	2,19,750	22	31,180	178	17,72,256											
7 Tanjore	..	..	123	16,72,236	43	94,820	7	5,200	240	3,07,443											
8 Transport and Machinery Division.	..	..	..	..	240	3,07,643	..	..	1	130											
9 Designs Division	..	..	..	..	1	130	..	..	17	19,120											
10 Coleroon Bridge Division	6	13,830	..	..	10	5,190	..	..	14	3,21,795											
11 Circle office	4	3,07,500	..	..	10	14,295	..	..	..	..											
12 Ponnar Bridge Division, Villupuram.	..	..	..	..	..	..	..	..	..	..											
Total	35	11,33,750	1,507	1,39,60,786	538	12,74,172	103	1,72,386	2,233	1,66,41,094											
13 Ramanathapuram	9	17,890	144	23,02,811	59	2,41,115	28	26,550	240	25,83,366											
14 Madurai	..	..	213	25,66,186	71	3,74,806	7	4,220	291	29,45,212											
15 Coimbatore	..	..	201	20,19,485	58	2,58,360	20	23,750	279	22,97,595											
16 Tirunelveli	15	13,020	123	14,94,297	96	3,19,920	14	12,880	248	18,44,617											
17 Erode	2	12,300	168	20,01,820	32	42,140	58	1,36,105	260	21,92,365											
18 Ootacamund	..	..	51	4,42,978	19	77,368	..	..	70	5,20,346											
19 Tiruchirappalli	..	..	267	29,36,003	52	4,61,585	68	69,480	387	34,66,068											
20 Circle office	5	9,68,927	..	..	1	500	..	..	6	3,69,427											
Total	31	4,17,137	1,167	1,37,59,580	388	17,75,794	195	2,71,485	1,781	1,62,23,996											
21 Mangalore	..	..	271	26,34,927	13	6,310	11	5,750	295	26,46,987											
22 Kozhikode	..	..	133	18,52,823	50	1,03,970	1	900	186	20,82,769											
23 Palghat	..	..	152	28,42,341	59	2,65,920	14	6,845	246	26,62,101											
24 Special Division, West Coast Road, Mangalore.	..	..	..	..	4	2,750	..	..	4	2,750											
25 Bridges Special Division, Mangalore.	..	..	..	..	..	..	..	..	3	5,190											
26 Special Division, West Coast Road, Kozhikode.	..	..	..	..	4	4,100	..	..	5	9,850											
27 Circle office	..	..	..	..	5	5,245	..	..	10	3,86,655											
Total	32	4,81,416	1,355	4,68,295	1,111	35,13,261	26	13,495	749	77,93,302											
Grand total	98	20,32,303	3,980	3,45,50,462	1,111	35,13,261	324	4,57,366	4,763	4,05,55,392											

ANNEXURE 16—cont.
Statement showing the technical sanctions to estimates during the year 1954-55—cont.
(ii) District Board Works.

Serial number and name of circle and division.	Original works.		Repairs.		Tools and plant and new supplies and repairs.		Avenues.		Non-Road Works.		Total.	
	(1)	Number of works for which estimates were sanctioned.	(2)	Cost.	Number of works.	Cost.	Number of works.	Cost.	Number of works.	Cost.	Number of works.	Cost.
				RS.		RS.		RS.		RS.		RS.
1 Salem	..	6	19,110	318	4,47,680	..	15	14,655	27	27,320	330	4,81,445
2 Krishnagiri	..	2	35,000	206	5,23,745	..	1	1,000	..	..	237	5,97,065
3 Vellore	..	8	1,17,760	516	5,50,630	..	23	21,110	60	1,43,065	539	5,71,740
4 Saidapet	..	12	66,000	385	5,75,675	..	3	3,600	..	..	436	8,39,990
5 Nagapattinam	..	57	6,83,965	719	6,35,720	..	34	14,340	188	4,40,176	423	7,70,140
6 Cuddalore	..	..	..	213	9,11,065	..	26	16,625	113	11,86,181	719	13,66,836
7 Tanjore	..	..	..	528	2,49,369	..	20	10,205	..	..	..	21,40,720
8 Transport and Machinery Division	..	..	..	..	..	..	..	..	..	..	..	..
9 Designs Division	..	..	..	..	..	..	..	..	..	..	..	..
10 Circle office	..	..	..	..	..	..	..	..	..	..	..	..
11 Coleroon Bridge Division	..	..	..	..	..	..	..	..	..	..	..	..
12 Ponnaiar Bridge Division, Villupuram	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	90	12,04,325	2,806	39,27,324	3	17,030	80,435	443	10,29,122	3,524	71,56,236
13 Ramanathapuram	..	13	4,97,460	210	10,72,915	3	24,400	17,860	134	53,103	392	16,65,333
14 Madurai	..	143	9,46,495	331	11,01,174	3	9,900	1,900	81	3,78,893	559	24,86,362
15 Coimbatore	..	12	3,53,800	287	7,81,133	3	8,346	5,920	110	1,44,415	405	9,67,814
16 Tirunelveli	..	33	1,94,450	165	11,04,500	2	4,200	4,700	34	78,050	264	15,49,850
17 Erode	..	26	1,94,450	480	21,92,313	1	6,600	9,650	69	51,166	583	24,54,370
18 Ootacamund	..	1	85,720	211	3,35,130	..	..	..	54	1,25,234	263	4,75,364
19 Tiruchirappalli	..	7	10,44,900	552	8,43,320	..	..	..	75	94,329	713	11,34,824
20 Circle office	..	21	..	..	..	..	..	..	..	..	21	10,44,900
Total	..	261	32,20,165	2,246	74,50,485	12	53,246	79,135	557	9,25,725	3,193	1,17,23,808
21 Mangalore	..	..	..	..	..	..	..	..	..	..	..	..
22 Kozhikode	..	..	..	..	..	..	..	..	..	..	..	..
23 Palghat	..	..	..	..	..	..	..	..	..	..	..	..
24 Circle office	..	..	..	..	..	..	..	..	..	..	..	..
25 Special Division, West Coast Roads, Mangalore	..	..	..	..	..	..	..	..	..	..	..	..
26 Special Division, West Coast Roads, Kozhikode	..	..	..	..	..	..	..	..	..	..	..	..
27 Bridges Special Division, Mangalore	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	7	2,49,250	435	9,96,801	..	..	..	82	1,03,118	326	13,49,869
Grand Total	..	358	46,71,749	5,547	1,23,74,910	15	70,276	1,60,320	1,082	29,57,965	7,243	2,02,34,911

ANNEXURE 16—cont.

(iii) Statement showing the technical sanctions to estimates for Municipal and Panchayat Works accorded by the Divisional Engineers (Highways) and Superintending Engineers (Highways) during the year 1954-55.

Serial number and name of circle or division.	Municipal Works.		Panchayat Works.	
	Number of works.	Cost.	Number of works.	Cost.
		RS.		RS.
Madras Circle.				
1 Salem	..	..	74	6,39,700
2 Krishnagiri	..	..	71	3,10,800
3 Vellore	18	1,14,556	7	21,333
4 Saidapet	1	5,300	..	..
5 Nagapattinam	4	13,670	..	..
6 Cuddalore	6	30,150	4	54,500
7 Tanjore	..	..	..	..
8 Circle office	4	1,39,800	..	..
Total ..	33	3,03,476	156	10,26,333
Tiruchirappalli Circle.				
9 Ramanathapuram	1	5,670	7	68,910
10 Madurai	3	16,100	..	..
11 Coimbatore	..	..	10	28,080
12 Tirunelveli	..	..	5	26,500
13 Erode	11	36,385	5	18,500
14 Ootacamund	..	..	8	47,640
15 Tiruchirappalli	1	19,000	..	..
16 Circle office	4	1,53,487	1	24,000
Total ..	20	2,30,642	36	2,1,630
West Coast Circle.				
17 Mangalore	..	..	3	42,000
18 Kozhikode	..	..	..	..
19 Palghat	8	89,267	1	7,500
20 Circle office	2	80,000	..	..
Total ..	10	1,69,267	4	49,500
Special Division.				
21 Coleroon Bridge Division	..	..	..	..
22 Ponnaiar Bridge Division	..	..	..	..
23 Transport and Machinery and Division	..	..	..	..
24 Designs Divisions	..	..	..	..
25 Special Division, West Coast Road, Mangalore.	..	..	..	..
26 Special Division, Kozhikode	..	..	..	..
27 Special Division Bridges, Mangalore	..	..	..	..
Total ..	..	..	..	..
Grand total ..	63	7,03,385	196	12,89,462

ANNEXURE 17.

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

Serial number and name of division.	Government Works.			District Board Works.			Municipal Works.			(10)
	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).		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
<i>Madras Circle.</i>										
1 Salem	113	1	..	172	..	..	..	..	286	
2 Krishnagiri.. .. .	89	41	..	138	3	..	..	..	271	
3 Vellore	163	..	9	147	1	..	..	..	320	
4 Saidapet	119	3	..	29	..	..	..	..	151	
5 Nagapattinam .. .	261	1	..	819	..	1	4	..	1,086	
6 Cuddalore	188	3	..	178	7	..	..	..	376	
7 Tanjore	94	3	..	145	..	..	..	..	242	
8 Coleroon Bridges division.	2	..	..	..	..	..	..	..	2	
9 Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	
Total ..	1,029	52	9	1,628	11	1	4	..	2,734	
<i>Tiruchirappalli Circle.</i>										
10 Ramanathapuram ..	108	12	..	140	5	..	1	..	266	
11 Madurai	113	12	..	193	1	..	2	..	321	
12 Coimbatore	156	..	..	217	..	..	..	..	373	
13 Tirunelveli	111	4	..	199	..	1	..	..	316	
14 Erode	86	10	..	176	1	..	1	..	274	
15 Ootacamund	35	..	..	55	..	..	..	..	90	
16 Tiruchirappalli ..	176	4	..	328	..	..	..	..	508	
Total ..	786	42	..	1,308	7	1	4	..	2,147	

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 the Divisional Engineer.		Accepted by the Superintending Engineer.		Total.	
	Number.	Amount. RS.	Number.	Amount. RS.	Number.	Amount. RS.
<i>Madras Circle.</i>						
Salem	188	6,15,196	11	3,51,625	199	9,66,821
Krishnagiri	142	6,35,164	..	..	142	6,35,164
Vellore	329	8,96,522	3	2,36,205	332	11,32,727
Saidapet	180	12,05,639	1	2,86,000	181	14,91,639
Nagapattinam .. .	110	5,70,300	2	64,990	112	6,35,290
Cuddalore	214	12,14,428	1	1,74,377	215	13,88,805
Tanjore	144	7,97,913	2	67,511	146	8,65,424
Coleroon Bridge Division ..	25	64,036	..	..	25	64,036
Transport and Machinery Division.	..	..	..	..	..	..
Total ..	1,332	59,99,198	20	11,80,708	1,352	71,79,906
<i>Tiruchirappalli Circle.</i>						
Ramanathapuram	257	14,55,761	1	1,34,262	258	15,90,023
Madurai	229	11,75,901	14	19,32,582	243	22,08,483
Coimbatore	155	9,01,696	1	61,971	157	9,63,667
Tirunelveli	115	10,69,789	..	..	115	10,69,789
Erode	183	8,67,828	5	3,81,166	188	12,48,994
Ootacamund	116	2,31,388	..	..	116	2,31,388
Tiruchirappalli	329	14,30,456	2	1,49,609	331	15,80,065
Total ..	1,385	71,32,819	23	17,69,590	1,408	88,92,409
<i>West Coast Circle.</i>						
Mangalore	129	11,45,073	34	10,38,092	163	21,83,165
Special Division, Mangalore ..	..	..	..	..	..	..
Bridges Division, Mangalore ..	..	..	..	..	..	..
Kozhikode	124	8,23,603	2	4,06,031	126	12,29,634
Special Division, Kozhikode ..	..	..	..	..	..	..
Palghat	172	11,38,112	11	1,90,477	183	13,28,589
Total ..	425	31,06,788	47	16,34,600	472	47,41,388
Grand total ..	3,142	1,62,38,805	90	45,74,898	3,232	2,08,18,703

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

<i>Madras Circle.</i>						
1 Salem	266	3,76,452	..	..	266	3,76,452
2 Krishnagiri	125	4,62,537	..	..	125	4,62,537
3 Vellore	139	2,74,123	..	..	139	2,74,123
4 Saidapet	80	2,06,477	..	..	80	2,06,477
5 Nagapattinam .. .	217	3,56,342	..	..	217	3,56,342
6 Cuddalore	327	9,91,219	..	..	327	9,91,219
7 Tanjore	142	4,76,705	..	..	142	4,76,705
8 Coleroon Bridge Division ..	..	..	..	..	..	..
9 Transport and Machinery Division.	..	..	..	..	..	..
Total ..	1,296	31,43,855	..	..	1,296	31,43,855
<i>West Coast Circle.</i>						
17 Mangalore	123	9	5	105	1	..
18 Special Division, Mangalore.	..	..	..	..	..	..
19 Bridges Division, Mangalore.	..	..	..	..	..	..
20 Kozhikode Division ..	27	48	..	37	4	..
21 Special Division, Kozhikode.	..	..	..	..	..	..
22 Palghat	115	3	..	78	..	..
Total ..	265	60	5	215	5	..
Grand total ..	2,079	154	14	3,151	23	2

ANNEXURE 18—cont.

Serial number and name of division.	Accepted by Divisional Engineers.		Accepted by Superintending Engineers.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
		RS.				RS.
<i>Tiruchirappalli Circle.</i>						
10 Ramapathapuram	139	4,22,513	..	..	139	4,22,513
11 Madurai	23	8,44,604	..	..	233	8,44,604
12 Coimbatore	318	6,10,723	..	..	318	6,10,723
13 Tirunelveli	200	15,28,475	..	..	200	15,28,475
14 Erode	216	8,89,677	..	..	216	8,89,677
15 Ootacamund	97	1,86,906	..	..	97	1,86,906
16 Tiruchirappalli	339	11,96,902	..	..	339	11,96,902
Total ..	1,542	56,79,800	..	..	1,542	56,79,800
<i>West Coast Circle.</i>						
17 Mangalore	101	2,67,293	..	..	101	2,67,293
18 Kozhikode	109	4,95,933	..	..	109	4,95,933
19 Palghat	67	1,81,462	..	..	67	1,81,462
Special Divisions at Mangalore and Kozhikode.	..	..	..	..	..	..
Total ..	277	9,44,688	..	..	277	9,44,688
Grand total ..	3,115	97,68,343	..	..	3,115	97,68,343

ANNEXURE 19

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

1. Tenders—

A. Government Roads—

	Number.	Cost.
		RS.
(i) Total cost of works for which tender proposals were approved by the Chief Engineer (Highways).	28	9,02,691
(ii) Total cost of works for which tender proposals were recommended to Government and approved by them.	5	1,87,735

B. District Board Roads—

(i) Total cost of works for which tender proposals were approved by the Chief Engineer (Highways).	2	7,85,000
(ii) Total cost of works for which tender proposals were recommended to Government and approved by them.	11	2,30,500

2. Estimates.—One hundred and three estimates to a total cost of Rs. 2,15,96,924 were dealt with during the year 1954-55 against 95 estimates totalling to Rs. 3,04,56,778 in 1953-54.

	Number of works.	Amount.
		RS.
1 Road works	65	1,03,84,700
2 Bridges and culverts	18	95,25,200
3 Other works	5	8,624
4 Tools and plant	15	16,78,400
Total ..	103	2,15,96,924

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 1954 ..	Forming a diversion road from mile 303/4 to 304/3 of Beneras Cape-Comorin road (N.H. 7).	1,23,000
2 June 1954 ..	Forming Thisayanvalai-Udankudi road (M.D.R. 30) ..	51,000
3 July 1954 ..	Forming a road from Kuttam to Manapad (via) Perialthai ..	70,000
4 Do. ..	Forming Maniyachi Kilpuvanal, Elamanaikanpatty road (O.D.R. 26) ..	35,000
5 August 1954 ..	Blacktopping Salem-Cochin road in miles 236/6 to 265/6 + 320' (N.H. 47).	5,59,500
6 Do. ..	Blacktopping Salem-Cochin road in miles 266/0 + 500' to 293/6 + 160 (N.H. 47).	7,56,000
7 Do. ..	Forming Appanuthu-Punganuthu road (V.R. 186) ..	10,000
8 Do. ..	Forming Iyampalayam village road (V.R. 170) ..	12,500
9 Do. ..	Forming Kanakkanpatty-Eramanaikanpatty road (V.R. 189).	12,800
10 Do. ..	Improving the road from Vadamadurai-Vembarappatty, Kimbarappatty road (M.D.R. 15).	57,000
11 Do. ..	Metalling Kudakoli road (M.D.R. 34) ..	64,000
12 Do. ..	Alumpatti to Madurai-Kottai road ..	42,000
13 Do. ..	Forming Karungalur-Irumbanad road (V.R. 15) ..	20,500
14 Do. ..	Forming Venkurichi-Amaliyapuram road and Mogavanoor-Ammayapuram road (V.R. 52 A and 55).	35,000
15 Do. ..	Forming Asaveerankudikad-Mangudian-Alathiyur road (V.R. 73).	35,000
16 Do. ..	Forming Kathattur-Kuvattur to Kulathur road (V.R. 67) ..	17,500
17 Do. ..	Metalling the road connecting Pudukottai-Gudalur road at mile 8/3 to meet Pudukottai-Trichy road (via) Rajakulathur Thirumalairayasamudram up to Uplikudi.	38,500
18 Do. ..	Metalling the road connecting Pudukottai-Trichy road at mile 5/5 with Pudukottai-Virallimalai road at Annavasal connecting villages Erumbalai Paravettivayal.	33,500
19 Do. ..	Metalling the road connecting Pudukottai-South Kulathur road at 10th mile with Pudukottai-Manapalai road (via) Kadambarayampatti.	54,000
20 Do. ..	Metalling the road connecting Pudukottai-Alankudi road at mile 9/7 with Pudukottai-Manipallam road (via) Kulandai-vinayagarkottai.	13,000
21 Do. ..	Metalling the road connecting from mile 9/6 of Pudukottai-Alankudi road to meet Pudukottai-Aranthangi road at 7th mile (via) Nichelepatty-Dhakshinapuram etc.	38,000
22 Do. ..	Forming Koilpatti-Pasuvanthanai — Kailasapuram road (O.D.R. 24 A).	3,90,000
23 Do. ..	Forming and metalling Anjur Jarmam-Overi including construction of culverts, etc.	2,96,000
24 Do. ..	Forming Kalarai to Uthorakosamangai (V.R. 15) ..	12,500
25 Do. ..	Forming Muthuvayyal Kamankottai and on to Valasai (V.R. 21) and part of (V.R. 17).	29,300
26 Do. ..	Forming Alavakottai to Kattanipatti (via) Namanur (O.D.R. 40).	16,500
27 Do. ..	Forming a road from 26/8 of N.H. 49 to Miiaganur (part of O.D.R. 30 and part of V.R. 9).	23,500
28 Do. ..	Forming Abiramam to Mudukulathur (O.D.R. 36 A) ..	49,500
29 Do. ..	Forming Kambadi to Kovilankulam (V.R. 21) ..	15,000
30 Do. ..	Abiramam to Viracholan (O.D.R. 36 B) ..	50,000
31 Do. ..	Forming Karisalkulam to Vembakkottai (via) Alankulam (Part of M.D.R. 40).	68,000
32 Do. ..	Forming and metalling Rameswaram to Rameswaram Railway.	55,000
33 Do. ..	Metalling Narikudi-Thiruchuli road ..	71,000
34 Do. ..	Metalling Maharajapuram-Alagapuri road (M.D.R. 35) ..	25,000
35 Do. ..	Metalling Virudhunagar-Alagapuri road (M.D.R. 39) ..	83,000
36 Do. ..	Gravelling Perunalai-Kovilankulam road (V.R. 22) ..	23,500
37 Do. ..	Gravelling Mudukulathur-Sikkal road (M.D.R. 36) ..	81,000
38 Do. ..	Metalling Sayalkudi-Sikkal (O.D.R. 28) ..	55,000
39 Do. ..	Forming Natham Kuttipatty Sethur Srirangathpatti Senthurai road (O.D.R. 3).	45,000

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>Road works—cont.</i>		
40 September 1954 ..	Forming Royavaram to Kothamangalam road (V.R. 116) ..	20,000
41 Do. ..	Forming Kurumbur-Peravai road (V.R. 47) ..	10,000
42 October 1954 ..	Improving Kallimandayam-Idayakottai road (O.D.R. 29) ..	27,500
43 Do. ..	Forming Thenpalanchi and Vadapalanchi road (V.R. 42 and 40).	20,100
44 December 1954 ..	Improvements to Coimbatore-Satyamangalam road mile 2/6 to 29/0.	1,25,700
45 Do. ..	Improvements to Kodaikanal-Munnar road 7/0 to 37/3 ..	6,57,000
46 Do. ..	Cement concreting Periakulam-Kuruvanathu road mile 7/0 to 9/0 (M.D.R.).	1,95,000
47 Do. ..	Blacktopping the W.B.M. portions in M. 261/0 to 324/7 of N.H. 7 (Benares Cape Comorin road).	4,97,100
48 Do. ..	Improving Kuttipatti Kodaipatti, Semburichi, Kampatty road (O.D.R. 4).	73,900
49 Do. ..	Forming Peraiyur Melapatti road (O.D.R. 4) ..	20,500
50 January 1955 ..	Blacktopping the W.B.M. portions in the stretch in M. 327/0 to 356/1 of N.H. 7 (Benares-Cape Comorin road).	2,82,800
51 Do. ..	Blacktopping the W.B.M. portions in the stretch in M. 363/8 to 431/7 of N.H. 7 Benares Cape Comorin road.	3,85,000
52 Do. ..	Blacktopping the stretches in M. 152/0 to 240/2 of N.H. 45 (Madras-Tiruchirappalli-Dindigul road).	6,97,000
53 Do. ..	Blacktopping the stretch in M. 241/0 to 257/0 of N.H. 45 (Madras-Tiruchirappalli-Dindigul road).	1,63,000
54 Do. ..	Cement concreting Madurai-Melur road M. 16/6 to 10/2 ..	3,78,000
55 Do. ..	Improvements to Melur-Tiruppattur road M. 19/2 to 28/0 ..	1,11,000
56 Do. ..	Improvements to Kakkalanchi-Nallamaram road ..	23,000
57 February 1955 ..	Blacktopping the stretches in M. 307/4 to 310/0, 312/4 and 320/0 to 323/0 of Salem-Cochin road (N.H. 47).	3,53,400
58 Do. ..	Forming and metalling Kovelam-Mahabalipuram road M. 0/0 to 12/0.	3,49,000
59 Do. ..	Formation of Pattuvam village road ..	1,25,000
60 March 1955 ..	Extending Ramanathapuram Mandapam road upto Mandapam Dry rock via Mandapam camp (N.H. 49).	1,27,500
61 Do. ..	Cement concreting Pollachi-Udumalpet road 1/0 to 3/1 (P.H.).	2,46,000
62 Do. ..	Widening the Blacktopped surface on the Madras-Bangalore road (N.H. 4).	2,19,000
63 Do. ..	Improvements to Madura-Kumil road (via) Theni (23 miles 7 furlongs).	3,54,800
64 Do. ..	Improvements to M. 0/0 to 32/0 of Palladam-Cochin Frontier road.	4,84,400
65 Do. ..	Forming Mallapuram-Narasimhapuram road (V.R. 322) ..	1,70,000
		103,81,700

Bridges and Causeways.

1 April 1954 ..	Constructing a bridge over Panamaram river at M. 10/2 Manantoddy Panamaram road.	4,90,000
2 May 1954 ..	Constructing a submersible bridge at M. 27/5 of Thirumuzhi-Satyavedu road.	2,86,000
3 July 1954 ..	Constructing a bridge at M. 4/8 of Kozhikode-Balusery road ..	2,45,000
4 August 1954 ..	Reconstructing the bridge at M. 15/3 of Oudalore-Vriddhachalam road.	3,00,000
5 Do. ..	Constructing the bridge across Nambiar at M. 4/8 of Nangunery-Tirukannakudi road.	1,11,000
6 Do. ..	Constructing a bridge over Karumanar at Manapad ..	3,58,000
7 Do. ..	Constructing a submersible bridge across Valgai river at M. 25/4 of Elayangudi-Paramakudi road.	4,84,000
8 Do. ..	Constructing a bridge over Buckingham Canal and forming an approach road between Kelampakam and Covelong.	1,78,700
9 Do. ..	Constructing culverts and minor bridges in Dindigul-Karur road M.D.R. 25.	50,000
10 Do. ..	Constructing a causeway at M. 0/1 of Kayattar-Kalugumalai road (M.D.R. 15).	50,000

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—cont.</i>		
11 November 1954 ..	Constructing a bridge at M. 187/4 of Madras-Bangalore road ..	1,71,000
12 Do. ..	Constructing a bridge across South Pennar-Ponniar at M. 104/4 of Madras-Dindigul road.	33,32,000
13 Do. ..	Constructing a bridge across Palar near Ranipet at M. 71/1-5 of Ranipet-Krishnagiri road.	19,75,000
14 Do. ..	Constructing causeways at M. 2/1 and 15/7 of Perambalur-Athur road.	22,000
15 December 1954 ..	Revised Estimate for constructing a bridge over Buckingham canal at M. 0/3 of Thiruvathiyur-Ponneri-Panjatir road.	1,85,000
16 Do. ..	Constructing a bridge over Kuppam river at M. 6/6-8 of Payyanur-Taliparamba section of Bombay-Cape Comorin road.	7,92,000
17 February 1955 ..	Constructing a bridge across Gowdammi river at M. 18/6-8 of Kotpadi-Venkatagiri Kotiah road (Gudiyatham Municipal limits).	2,75,000
18 March 1955 ..	Constructing a bridge across Kubjanadhi at M. 9/0 of Halladi-Wandse road.	2,22,500
	Total ..	95,25,200

Other works.

1 July 1954 ..	Estimate for conducting experiments in the research laboratory for the year 1954-55.	2,500
2 Do. ..	Estimate for the purchase of office furniture to Chief Engineer's office.	2,000
3 December 1955 ..	Estimate for the manufacture of utility water carts ..	1,811
4 February 1955 ..	Estimate for the purchase of office furniture to Chief Engineer's office.	2,000
5 March 1954 ..	Estimate for the purchase of furniture to Chief Engineer's office.	313
	Total ..	8,624

Tools and Plant.

1 June 1954 ..	Estimate for the purchase of a water jetting equipments and its accessories.	22,000
2 August 1954 ..	Estimate for the purchase of 20 numbers of 3 inches self primary pumps and their accessories.	36,000
3 Do. ..	Estimate for the purchase of 15 numbers of 3 inches self primary pumps and their accessories.	28,000
4 September 1954 ..	Estimate for the purchase of Calendar Hanton Bridge Units from disposal.	27,500
5 October 1954 ..	Estimate for the purchase of one compression testing machine 50 ton capacity.	12,000
6 Do. ..	Estimate for the purchase of bulldozers 6 numbers ..	3,36,000
7 Do. ..	Estimate for the purchase of 5 tractors under G.O. No. 906, dated 12th May 1949.	77,000
8 Do. ..	Estimate for the purchase of 17 water pumps and 23 centrifugal pumps as per G.O. No. 906, dated, 12th May 1949 and G.O. No. 1553, dated 7th April 1952.	98,000
9 November 1954 ..	Estimate for the purchase of 1 milling machine ..	28,000
10 Do. ..	Estimate for the purchase of motor graders ..	8,70,000
11 Do. ..	Estimate for the purchase of Air Compressor ..	24,700
12 Do. ..	Estimate for the purchase of 4 numbers of Calyse Type Drills.	54,000
13 Do. ..	Estimate for the purchase of 4 numbers of Emersion type vibrators.	9,500
14 February 1955 ..	Estimate for the purchase of 2 sets of consistents and aggregate impact testing machines.	3,700
15 Do. ..	Purchase of Jeeps 4 numbers including trailers ..	52,000
	Total ..	16,78,400

ANNEXURE 20.

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

Year.	Government Roads.					
	Maintenance.		Surfacings.		Bridges, culverts and causeways.	
	Number. (2)	Cost. (3)	Number. (4)	Cost. (5)	Number. (6)	Cost. (7)
		RS.		RS.		RS.
1946-47 ..	2,087	1,03,91,377	36	6,16,240	80	1,86,825
1947-48 ..	3,516	1,85,83,688	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	4,10,35,074	487	63,01,105	366	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
1954-55 ..	2,055	1,33,63,860	452	60,23,497	180	45,82,692

Year.	District Board Roads.							
	Maintenance.		Surfacings.		Bridges, culverts and can-eways.		Total.	
	Num. ber.	Cost.	Num. ber.	Cost.	Num. ber.	Cost.	Num. ber.	Cost.
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	RS.	RS.	RS.	RS.	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	4,20,84,603
1949-50 ..	5,067	1,34,98,933	220	34,55,376	269	22,59,252	9,728	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
1954-55 ..	2,722	81,64,164	74	8,29,254	106	18,52,712	5,589	3,48,16,179

NOTE.—(1) The particulars for the years 1946-47 to 1953-54 are for the year 1954-55.

NOTE.—(1) The particulars given for the years 1946-47 to 1952-53 relate to the Composite State of Madras while those of the years 1953-54 and 1954-55 are for the present Madras State.
(2) Division-wise details for the year 1954-55 are given in Statement (ii).

ANNEXURE 20—cont.

(ii) Statement showing the contracts awarded during 1954-55.

Serial number and name of circle and division.	Government Roads.						District Board Roads.						Total number.	Total cost.
	Maintenance.		Surfacings.		Bridges, culverts and causeways.		Maintenance.		Surfacings.		Bridges, culverts and causeways.			
	Num-ber.	Cost.	Num-ber.	Cost.	Num-ber.	Cost.	Num-ber.	Cost.	Num-ber.	Cost.	Num-ber.	Cost.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
		RS.		RS.		RS.		RS.		RS.		RS.		RS.
Madras Circle.														
1 Saidapet ..	95	8,92,354	23	2,65,616	3	1,54,132	24	1,35,308	..	..	7	88,400	152	15,35,810
2 Cuddalore ..	130	11,69,780	54	7,38,848	31	3,54,081	297	9,14,841	..	..	30	7,98,480	542	40,05,805
3 Nagapattinam ..	101	5,74,535	11	60,755	2	10,310	214	3,51,842	..	..	3	4,500	331	9,92,482
4 Tanjore ..	140	7,57,796	2	30,467	2	10,310	142	4,76,705	..	..	..	..	286	12,74,618
5 Vellore ..	153	11,32,154	21	1,44,048	2	2,330	139	3,69,939	..	..	..	..	313	16,46,441
6 Salem ..	81	4,23,860	52	4,07,858	1	62,234	172	4,20,498	..	..	2	10,500	258	12,54,536
7 Krishnagiri ..	83	2,77,813	46	2,55,055	21	..	136	4,80,827	3	30,100	..	..	271	11,10,529
8 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Erode ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Villupuram ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tiruchirappalli Circle.														
11 Tiruchirappalli ..	229	7,04,937	72	6,03,489	30	92,461	313	9,93,132	20	2,03,770	..	..	670	27,78,987
12 Madurai ..	97	8,27,807	34	11,57,999	2	34,400	179	8,14,826	11	1,10,690	4	46,385	327	30,01,953
13 Ramanathapuram ..	241	18,83,372	..	..	17	2,21,764	131	3,76,776	1	18,000	7	28,287	397	20,12,586
14 Tirunelveli ..	105	15,43,383	3	82,065	7	64,442	154	5,69,970	30	4,57,868	16	4,70,519	315	25,98,284
15 Erode ..	61	15,43,383	17	2,55,100	13	64,442	146	7,72,470	..	..	23	1,30,532	260	27,73,774
16 Coimbatore ..	110	15,43,383	43	1,82,038	4	14,173	312	5,75,294	3	8,658	8	26,771	475	16,74,390
17 Ootacamund ..	109	15,43,383	3	26,168	4	5,446	90	1,79,578	..	..	7	6,928	213	4,18,294
West Coast Circle.														
18 Mangalore ..	952	6,01,158	172	27,96,845	77	5,13,723	1,325	43,11,926	71	7,99,154	60	7,18,722	2,657	1,51,86,178
19 Kozhikode ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20 Palghat ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21 Special Division, Mangalore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22 Bridges (Special) Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23 Special Division, Kozhikode ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	360	21,20,750	71	13,24,010	41	12,97,328	273	7,02,578	..	..	4	2,42,110	749	56,86,078
Grand total ..	2,055	1,33,63,860	452	60,23,497	180	45,82,692	2,792	81,64,164	74	8,29,254	106	18,52,712	5,589	3,48,16,179

D 411

NS

ANNEXURE 21.

(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	238	550
1949-50	263	399	662
1950-51	113	428	544
1951-52	91	506	597
1952-53	93	212	305
1953-54	30	46	76
1954-55	148	33	181
Total	1,243	2,461	3,704

NOTE.—Division-wise particulars for the year 1954-55 are given in Statement (ii).

(ii) Statement showing the number of investigations in 1954-55.

Serial number and name of division.	Number of investigations.		
	Government.	District boards.	Total.
<i>Madras Circle.</i>			
1 Krishnagiri	2	6	8
2 Salem	5	1	6
3 Vellore	3	..	3
4 Saidapet	11	4	15
5 Nagapattinam	..	2	2
6 Cuddalore	1	3	4
7 Tanjore	..	..	..
<i>Tiruchirappalli Circle.</i>			
8 Ramanathapuram	..	..	..
9 Madurai	5	..	5
10 Coimbatore	..	..	..
11 Tirunelveli	..	5	5
12 Erode	..	5	5
13 Ootacamund	..	3	3
14 Tiruchirappalli	1	..	1
15 Assistant Engineer (Bridges)	18	3	21
<i>West Coast Circle.</i>			
16 Mangalore	2	1	3
17 Special Division, Mangalore	46	..	46
18 Bridges Division, Mangalore	3	..	3
19 Kozhikode Division	1	..	1
20 Special Division, Kozhikode	48	..	48
21 Palghat	2	..	2
Total	148	33	181

ANNEXURE 22.

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

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 ROADS.			
<i>1. Bridges, culverts and causeways.</i>			
1 Constructing causeways at M. 23/8, 24/3, 21/3 and 27/3 of Bisley Ghat road—Estimate Rs. 2,59,500 (Road Development Fund—Mangalore Division).	86,782	2,10,448	Works in progress and nearing completion.
2 Constructing a bridge at M. 52/2 Chundale-Mysore Frontier road—Estimate Rs. 1,40,000 (Road Development Fund—Kozhikode Division).	38,362	1,41,525	Work nearing completion.
3 Constructing a bridge at M. 69/1 of Chundale-Mysore Frontier road—Estimate Rs. 1,50,000 (Road Development Fund—Kozhikode Division).	36,387	1,37,695	Do.
4 Constructing a bridge at M. 73/1 of Chundale-Mysore Frontier road—Estimate Rs. 1,65,000 (Road Development Fund—Kozhikode Division).	58,668	1,28,870	Work in progress.
5 Reconstructing the bridge at M. 56/6 of Chundale-Mysore Frontier road—Estimate Rs. 1,55,000 (Road Development Fund—Kozhikode Division).	17,604	1,16,289	Works was nearing completion.
6 Reconstructing the bridge at M. 49/8 of Chundale-Mysore Frontier road—Estimate, Rs. 1,25,000 (Road Development Fund—Kozhikode Division).	43,326	1,04,762	Do.
7 Reconstructing the bridge at M. 66/6 of Chundale-Mysore Frontier road—Estimate, Rs. 1,40,000 (Road Development Fund—Kozhikode Division).	22,423	1,20,385	Work was in progress.
8 Reconstructing the Puchmogar bridge at M. 5/5 of Mudabidri-Buntwal road—Estimate Rs. 4,20,000/4,40,000 (Development Schemes—Mangalore Division).	1,52,229	3,04,252	Work was in progress. All the piers and abutments raised upto the deck level.
9 Constructing a bridge over Nileshtar at M. 50/2 of Kanhangad-Chervathur road—Estimate Rs. 3,50,000 (Development Schemes—Mangalore Division).	1,04,546	2,54,877	Work was in progress.
10 Constructing a bridge across Ariadkadavu Hole at M. 52/3 of Kanhangad-Chervathur road—Estimate Rs. 5,80,000 (Development Schemes—Mangalore Division).	1,61,701	1,87,426	Do.
11 Reconstructing Belthangadi bridge at M. 37/3 of Mangalore-Mysore road—Estimate Rs. 2,75,000 (Development Schemes—Mangalore Division).	40,145	40,145	Do.
12 Constructing a bridge across Perumbayi at Payyanur at M. 75/8 of Cape Comorin-Bombay road—Estimate Rs. 5,70,000 (Development Schemes—Kozhikode Division).	1,03,936	1,77,837	Do.
13 Reconstructing Kalmady bridge at M. 0/4 of Malpe-Udupi-Karkal road—Estimate Rs. 1,80,000 (Development Schemes—Mangalore Division).	83,092	2,12,532	Work was nearing completion.
14 Constructing a submersible bridge over Gundia river at M. 15/1 of Bisley Ghat road—Estimate Rs. 2,40,000 (Development Schemes—Mangalore Division).	36,887	86,889	Work was in progress.
15 Constructing a bridge at Panamaram at M. 10/2 of Manantody-Panamaram road—Estimate Rs. 4,50,000 (Development Schemes—Kozhikode Division).	36,383	36,383	Do.
16 Constructing a bridge across Agavalam river at M. 13/2 of Arkonam-Ocheri road—Estimate Rs. 2,00,000 (Development Schemes—Vellore Division).	89,832	1,25,156	Pier completed. Decking work in progress.
17 Constructing a bridge across Palar at M. 71/1-5 of Ranipet-Krishnagiri road—Estimate Rs. 19,75,000 (Road Development Schemes—Vellore Division).	3,101	3,101	....
18 Constructing a bridge across river Goundanya at M. 18/7-8 of Katpadi-Venkatagirikota road—Estimate Rs. 2,75,000 (Development Schemes—Vellore Division).	3,127	3,127	....
19 Constructing a bridge across Palar at M. 38/5 of Great Southern Trunk road—Estimate Rs. 25,00,000 (Development Schemes—Saidapet Division).	7,00,143	22,98,072	Work was nearing completion.
20 Constructing a bridge at M. 27/5 of Tirumuzhi-Sathyavedu road—Estimate Rs. 2,86,000 (Development Schemes—Saidapet Division).	56,387	56,685	....

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.	RS.	
A. GOVERNMENT ROADS—cont.			
I. Bridges, culverts and causeways—cont.			
21 Reconstructing the bridge at M. 15/3 of Cuddalore-Vridhachalam road—Estimate Rs. 2,00,000 (Development Schemes—Cuddalore Division).	23,177	22,177	....
22 Constructing a culvert at M. 13/6 of Vikravandi Lower Anicut road—(Sub-estimate for metalling the gravelled portions in M. 135 to 142). Estimate Rs. 1,65,000 (Development Schemes—Cuddalore Division).	12,981	1,27,273	....
23 Reconstructing the bridge at M. 1/1 of Morkaniam-Tindivanam road—Estimate Rs. 2,90,000 (Development Schemes—Cuddalore Division).	1,74,473	2,79,562	....
24 Constructing a bridge across Pennar river at M. 104/245 of Madras-Tiruchirappalli-Dindigul road. — Estimate Rs. 33,32,000 (Development Schemes—Villupuram Division).	45,723	45,723	....
25 Constructing a causeway across Agnair river at M. 6/4-5 of Pattukkottai-Arantangi road—Estimate Rs. 2,75,000 (Development Schemes—Tanjore Division).	1,00,886	3,65,310	....
26 Constructing a bridge across Coleroon river at Anaikaran Chatram on Chidambaram-Sirkali road—Estimate Rs. 28,50,000 (Development Schemes—Coleroon Bridge Division).	2,48,692	21,21,035	....
27 Reconstructing the bridge at M. 66/6 of Madurai-Ramanathapuram road—Estimate Rs. 2,66,900 (Development Schemes—Ramanathapuram Division).	1,36,182	1,44,289	Bridge was nearing completion
28 Constructing a bridge across Noyyal river at M. 27/1 of Karur-Kodumudi road—Estimate Rs. 2,70,000 (Development Schemes—Tiruchirappalli Division).	81,999	2,72,539	....
29 Strengthening and widening Kaveripattinam bridge at M. 166/4 of Benares Cape Comorin road — Estimate Rs. 2,45,000 (Road Development Fund—Krishnagiri Division).	4,984	4,18,182	....
30 Constructing a bridge at M. 187/4 of Madras-Bangalore road—Estimate Rs. 1,50,000 (Road Development Fund—Krishnagiri Division).	2,320	2,320	....
31 Constructing a vented causeway across Ponnai at M. 12/4 of Dharmapuri-Tirupathur road—Estimate Rs. 1,40,000 (Road Development Fund—Krishnagiri Division).	6,964	1,40,030	....

II. Cement-concrete and black-top works.

1 Blacktopping Salem-Cochin road—M. 236/8 + 500' to 256/6. Estimate Rs. 5,59,500—(Development Schemes—Salem Division).	3,76,018	3,76,018	....
2 Providing cement concrete surface in M. 0-1/6 of Cuddalore-Chittoor road—Estimate Rs. 1,86,000 (Development Schemes—Cuddalore Division).	10,926	1,85,139	....
3 Providing cement concrete surface in M. 10 to 17 of Cuddalore-Chittoor road—Estimate Rs. 6,90,000 (Development Schemes—Cuddalore Division).	47,098	6,62,337	....
4 Providing cement concreteting M. 1/6 to 10 of Cuddalore-Chittoor road—Estimate Rs. 7,15,000 (Development Schemes—Cuddalore Division).	— 3,403	7,72,046	....
5 Cement-concreteting Tanjore-Tiruvadi road and Coleroon Bank road—Estimate Rs. 1,17,000 (Development Schemes—Tanjore Division).	10,704	1,19,434	....
6 Cement-concreteting Tanjore - Tiruvadi road—M. 5/0 to 8/5. — Estimate Rs. 3,71,000 (Road Development Fund—Tanjore Division).	21,379	3,42,655	....
7 Cement-concreteting Salem Junction to Salem bye-pass road—M. 1/4 to 3/4. — Estimate, Rs. 1,65,000 (Road Development Fund—Salem Division).	— 492	1,54,712	....

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.**II. Cement-concrete and black-top works—cont.**

8 Black-topping the portions including widening of appropriate reaches in M. 26/0 to 324/7 of Great Southern Trunk road—Estimate Rs. 4,97,100 (Development Schemes—Madurai Division).	2,66,828	2,66,828	....
9 Black-topping the water bound macadam portions in the stretch M. 241 to 257/0 of Benares-Cape Comorin road—Estimate Rs. 1,63,000 (Development Schemes—Madurai Division).	82,649	82,649	....
10 Providing improved surfacing to Coimbatore-Sathyamangalam road M. 2/6 to 29/0. — Estimate Rs. 1,25,700 (Development Schemes—Coimbatore Division).	26,522	26,522	....
11 Providing blacktop surface in the remaining stretches of Benares-Cape Comorin road M. 366 to 431/7—Estimate Rs. 3,85,000 (Development Schemes—Tirunelveli Division).	49,906	49,906	....
12 Black-topping stretch M. 150 to 240/7 of Great Southern Trunk road—Estimate Rs. 6,97,000 (Development schemes—Tiruchirappalli Division).	2,65,463	2,65,463	....
13 Cement - concreteting Tiruchirappalli-Tanjore road - M. 21/2 to 26/0—Estimate Rs. 3,05,000 (Development Schemes—Tiruchirappalli Division).	1,40,545	1,40,545	....
14 Black-topping the water bound macadam portions in M. 327/0 to 358/1 of Benares-Cape Comorin road—Estimate Rs. 2,82,000 (Development Schemes—Ramanathapuram Division).	1,00,624	1,00,624	....

III. New formations.

1 Forming the unformed portions of the road to Koli Hills. — Estimate Rs. 24,00,000 (Development Schemes—Salem Division).	1,154	5,661	....
2 Forming a road 21½ miles Ramanathapuram-Pamban road M. 0/0 to 21/4. — Estimate Rs. 1,98,000 (Development Schemes—Ramanathapuram Division).	7,711	4,00,220	Culverts completed. Level crossing was to be provided by the Railway authorities.
3 Forming a diversion road from M. 308/4 to 304 8 of Benares-Cape Comorin road—Estimate Rs. 23,000 (Development Schemes—Madurai Division).	2,004	2,004	....

IV. Improvements and special repairs.

1 Improvements to Yercaud Ghat road—Estimate Rs. 17,5,000 (Development Schemes—Salem Division).	6,912	2,09,259	Main work was completed. Only the work in sub-estimate was in progress.
2 Metalling Vridhachalam-Salem road M. 51 to 73—Estimate Rs. 1,90,000 (Development Schemes—Cuddalore Division).	39,000	2,01,883	....
3 Improvements to Melur-Tirunathur road—M. 9/2 to 28/0 - Estimate Rs. 1,41,000 (Development Schemes—Madurai Division).	30,145	30,145	....
4 Improvements to Kodalkanal—Munnar road—Estimate Rs. 6,57,000 (Development Schemes—Madurai Division).	10,030	10,030	....

B. DISTRICT BOARD ROADS.**I. Bridges, culverts and causeways.**

1 Constructing a bridge at M. 6/5 of Ulleri-Perambra road—Estimate Rs. 3,00,000 (Road Development Fund—Kozhikode Division).	39,428	39,428	....
2 Constructing a bridge at M. 9/8 of Talparamba-Iratty road. — Estimate Rs. 4,90,000 (Road Development Fund—Kozhikode Division).	59,259	59,259	....

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.		
B. DISTRICT BOARD ROADS—cont.			
I. Bridges, culverts and causeways—cont.			
3 Constructing a bridge across backwaters of Buckingham Canal near Covelong-Kelambakkam road—Estimate Rs. 1,75,700 (Road Development Fund—Saidapet Division).	77,625	1,03,636	....
4 Constructing a submersible bridge across the river Gadlam at M. 110/2 of Vikravandy-Lower Pungent road—Estimate Rs. 2,24,000 (Road Development Fund—Cuddalore Division).	42,438	1,11,913	....
5 Constructing a causeway across Pennar at Melpattambakkam—Estimate Rs. 5,44,000 (Road Development Fund—Cuddalore Division).	1,98,325	1,98,325	....
6 Constructing a bridge across Kodamurutti river in Ayyampet-Ganapathi Agraharam road—Estimate Rs. 1,50,000 (Road Development Fund—Tanjore Division).	15,462	2,06,462	....
7 Constructing a submersible bridge at M. 25/4 of Elayangudi-Parakudi road—Estimate Rs. 4,82,000 (Ramanathapuram Division).	18,478	4,82,217	Work completed, Providing hand rails in progress.
8 Constructing a bridge at Manapad across Karananiar—Estimate Rs. 2,20,000 (Road Development Fund—Tirunelveli Division).	51,615	51,615	....
9 Constructing a bridge across Gatana at M. 2/3 of Ambasamudram-Alangulam road—Estimate Rs. 4,64,000 (Road Development Fund—Tirunelveli Division).	1,29,859	1,29,859	....
10 Constructing a bridge at Mukkani on Tuticorin-Tiruchendur road—Estimate Rs. 7,70,000 (excluding Post-war Road Development—Tirunelveli Division).	51,140	51,140	....
11 Constructing a bridge at M. 4/8 of Nanguneri-Tirukarangudi road—Estimate Rs. 1,10,000 (Post-war Road Development—Tirunelveli Division).	2,923	2,923	....

II. Cement concreting and black-top works—Nil.

III. New formations.

1 Forming Taliparamba-Kanhirangad Chapparatapadavu road—Estimate Rs. 2,62,200 (Development Schemes—Kozhikode Division).	4,742	1,79,762	Work in progress.
2 Forming a road from Cannanore-Irrikur to Mayyil Kayavlam—Estimate Rs. 2,69,099 (Excluding Post-war Road Development—Kozhikode Division).	3,052	1,05,150	Land acquisition proceedings were in progress.
3 Forming a road from Padiotchal to Pulingeru—Estimate Rs. 1,54,007 (Excluding Post-war Road Development—Kozhikode Division).	5,604	1,15,308	Do.
4 Forming a road from Chapparatapadavu to connect road No. 3—Estimate Rs. 2,39,000 (excluding Post-war Road Development—Kozhikode Division).	6,198	1,34,564	Do.
5 Forming a road from Rajalingamangalam to Elayangudi—Estimate Rs. 2,40,000 (Ramanathapuram Division).	55,984	2,50,779	Work completed excepting the culverts, the execution of which was in progress.
6 Forming a road from Elayarampannai to Guhanparai—Estimate Rs. 1,22,200 (Ramanathapuram Division).	4,910	56,068	Work completed excepting culvert, which were in progress.
7 Forming and metalling road from Koppatti Pasuvanthurai—Estimate Rs. 1,10,000 (Road Development Fund—Tirunelveli Division).	29,065	29,065	....
8 Forming a road from Anjugramam to Ovari—Estimate Rs. 2,06,000 (Road Development Fund—Tirunelveli Division).	51,367	51,367	....

IV. Improvements and special repairs—Nil.

ANNEXURE 22—cont.

(ii) Review of works costing over Rs. 1 lakh each completed during the year 1954-55.

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 ROADS.			
I. Bridges, culverts and causeways.			
1 Constructing a bridge across Swarnanadhi at Puttige at M. 13/1 of Hariadka Hebri road—Estimate Rs. 4,00,000 (Development Schemes—Mangalore Division).	63,895	5,81,427	Work completed and the bridge opened for traffic.
2 Reconstructing the weak bridge at M. 4/8 of Kozhikode-Balusseri road—Estimate Rs. 2,45,000 (Development Schemes—Kozhikode Division).	32,379	2,15,003	Work completed.
3 Constructing a causeway at M. 13/5 to 14/1 of Uttiramerur-Kancheepuram road—Estimate Rs. 1,70,000 (Road Development Fund—Saidapet Division).	63,791	1,54,192	Do.
4 Constructing a bridge at M. 6/1-2 of Dindigul-Arayakurichi road—Estimate Rs. 1,55,000 (Development Schemes—Madurai Division).	8,679	1,91,549	Work completed in 1952-53. But the cost of steel was adjusted in 1954-55.
II. Cement-concrete and black-top works.			
1 Cement concreting Cuddalore-Chittoor road M. 10/0 to 17/0—Estimate Rs. 4,50,000 (Road Development Fund—Cuddalore Division).	3,425	3,88,052	Work completed.
2 Black top surfacing Thandigudi ghat road M. 0/0 to 19/0—Estimate Rs. 2,20,000 (Development Schemes—Madurai Division).	12,422	2,28,912	Do.
3 Cement concreting Dindigul-Palni road M. 32/0 to 34/6—Estimate Rs. 2,20,000—(Development Schemes—Madurai Division).	6,422	2,15,445	Do.
III. New formations.			
1 Forming a bye-pass road at M. 36/4 to 38/1 of Kozhikode—Cannanore road—Estimate Rs. 2,00,000 (Development Schemes—Kozhikode Division).	2,62,802	2,70,829	Work completed.

IV. Improvements and special repairs—Nil.

B. DISTRICT BOARD ROADS.

I. Bridges, culverts and causeways.

1 Constructing a causeway across Palar at M. 13/1 of Nelvoy - Tirukalikunram road—Estimate Rs. 4,25,000 (Road Development Fund—Saidapet Division).	2,92,733	4,24,054	Work completed.
2 Constructing a causeway at M. 19/7 of Devakottai-Devipatnam road—Estimate Rs. 1,43,300 (Ramanathapuram Division).	21,815	1,08,559	Do.
3 Constructing a culvert at M. 2/3 of Ambasamudram-Alangulam road—Estimate Rs. 6,60,000 (Road Development Fund—Tirunelveli Division).	5,730	5,730	Do.

II. Cement-concrete and black-top works—Nil.

III. New formations—Nil.

IV. Improvements and special repairs.

1 Metalling Mayyur-Vanapuram road M. 1/0 to 7/0 and M. 7 to 10—Estimate Rs. 1,10,740 (Vellore Division).	16,225	1,14,974	Work completed.
--	--------	----------	-----------------

(i) Review of works costing less than Rs. 1 lakh each in progress during 1954-55.

Serial number, name of circle and division	Government works.			District Board works.		
(1)	Total number of works.	Total cost.	Remarks.	Total number of works.	Total cost.	Remarks.
(2)	(3)	(4)	(5)	(6)	(7)	(8)
RS.	RS.	RS.	RS.	RS.	RS.	(9)
<i>Madras Circle.</i>						
1 Chingleput	..	..	..	1	38,000	25,000
2 Cuddalore	3	39,000	..	5	2,19,800	19,373
3 Nagapattinam	..	..	..	4	2,13,300	34,843
4 Tanjore	..	..	..	..	..	..
5 Vellore	..	..	..	..	..	..
6 Salem	..	..	..	..	..	..
7 Krishnagiri	2	1,42,500	..	32	5,90,360	84,235
8 Coleroon Bridge Division	..	..	..	..	..	..
9 Special Division, Villupuram	..	..	..	..	..	..
Total	5	1,91,500	..	42	10,59,400	1,63,456
<i>Tiruchirappalli Circle.</i>						
10 Tiruchirappalli	2	21,000	..	..	..	..
11 Madurai	..	..	..	..	..	..
12 Ramanathapuram	5	26,900	..	7	87,500	15,935
13 Tirunelveli	3	73,200	..	33	3,31,540	97,491
14 Erode	..	..	..	1	92,300	11,840
15 Coimbatore	..	..	..	3	27,900	20,709
16 Ootacamund	..	..	..	1	40,000	18,155
Total	10	1,21,100	..	45	6,29,240	1,64,430
<i>West Coast Circle.</i>						
1 Mangalore	1	78,000	64,370	..	..	..
2 Kozhikode	1	80,000	75,369	..	..	..
3 Tirunelveli	..	..	..	..	..	..
Total	2	1,58,000	1,39,745	..	..	..
Grand total	17	4,60,600	2,87,720	90	17,53,600	3,35,259

Works in prog

20 Special Division, Mangalore	..	..	..	..	..	..
21 Bridges Division (Special), Mangalore	..	..	..	..	..	..
22 Special Division, Kozhikode	..	..	..	..	..	..
Total	2	1,58,000	1,39,745	3	66,900	7,403
Grand total	17	4,60,600	2,87,720	90	17,53,600	3,35,259

II. Cement-concrete and black-top works.

<i>Madras Circle.</i>						
1 Saidapet	..	..	..	..	..	..
2 Cuddalore	..	..	..	1	69,000	3,343
3 Nagapattinam	..	..	..	..	..	..
4 Tanjore	..	..	..	..	..	..
5 Vellore	..	..	..	..	..	..
6 Salem	..	..	..	..	..	..
7 Krishnagiri	..	..	..	11	1,22,900	1,05,365
8 Coleroon Bridge Division	..	..	..	..	..	..
9 Special Division, Villupuram	..	..	..	..	..	..
Total	..	..	..	12	1,91,900	1,05,713
<i>Tiruchirappalli Circle.</i>						
10 Tiruchirappalli	2	18,200	15,961	..	..	..
11 Madurai	..	..	..	..	..	..
12 Ramanathapuram	..	..	..	..	..	..
13 Tirunelveli	..	..	..	..	..	..
14 Erode	..	..	..	..	..	..
15 Coimbatore	..	..	..	..	..	..
16 Ootacamund	..	..	..	..	..	..
Total	2	18,200	15,961	..	..	..
<i>West Coast Circle.</i>						
17 Mangalore	..	..	..	..	..	..
18 Kozhikode	1	8,000	5,125	..	..	..
19 Palghat	..	..	..	..	..	..
20 Special Division, Mangalore	..	..	..	..	..	..
21 Bridges Division (Special), Mangalore	..	..	..	..	..	..
22 Special Division, Kozhikode	..	..	..	..	..	..
Total	1	8,000	5,125	..	..	..
Grand Total	3	26,200	21,086	12	1,91,900	1,08,713

ANNEXURE 23 - cont.

(i) Review of works costing less than Rs. 1 lakh each in progress during the year 1954-55—cont.

Serial number, name of circle and 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.	
Madras Circle.								
1 Saidapet .. .. .	..	..	..	....	5	62,500	19,440	....
2 Cuddalore .. .. .	..	..	..	....	22	2,45,910	24,193	....
3 Nagapattinam .. .. .	..	..	..	....	*15	1,70,750	18,203	....
4 Tanjore .. .. .	..	..	..	....	1	7,000	..	....
5 Vellore .. .. .	..	..	..	....	24	7,29,300	20,117	....
6 Salem .. .. .	..	..	..	....	17	1,79,800	1,04,131	....
7 Krishnagiri .. .. .	..	..	..	....	..	..	..	....
8 Coleroon Bridge Division ..	..	..	..	....	10	1,53,070	28,715	....
9 Special Division, Villupuram ..	..	..	..	....	..	..	..	....
Total .. .. .	..	..	..	....	94	15,47,030	2,18,799	....
Tiruchirappalli Circle.								
10 Tiruchirappalli	2	1,32,800	59,765	....	20	2,78,760	1,62,902	....
11 Madurai	1	99,000	99,340	....	90	10,17,000	4,96,238	....
12 Ramanathapuram .. .. .	..	..	..	....	8	3,32,200	90,930	....
13 Tirunelveli .. .. .	..	..	..	....	11	2,00,000	59,042	....
14 Erode .. .. .	..	..	..	....	2	11,247	6,663	....
15 Coimbatore .. .. .	..	..	..	....	7	57,400	49,637	....
16 Ootacamund .. .. .	..	..	..	....	..	..	..	....
Total	3	2,31,800	1,59,105	....	138	19,96,607	8,62,503	....
West Coast Circle.								
17 Mangalore .. .. .	..	..	..	....	7	2,21,175	1,73,605	....
18 Kozhikode .. .. .	..	..	..	....	20	16,37,050	75,708	....
19 Palghat .. .. .	..	..	..	....	3	1,55,800	91,882	....
20 Special Division, Mangalore ..	..	..	..	....	..	..	..	....
IV. Improvements and special repairs.								
Madras Circle.								
21 Bridges (Special) Mangalore ..	..	..	..	....	..	..	..	....
22 Special Division, Kozhikode ..	..	..	..	....	..	..	..	....
Total .. .. .	..	..	..	....	30	20,14,020	8,43,195	....
Grand Total	3	2,31,800	1,59,105	....	262	55,57,657	14,24,502	....
Tiruchirappalli Circle.								
1 Saidapet .. .. .	..	..	..	....	..	..	..	....
2 Cuddalore .. .. .	..	..	..	....	2	2,09,700	11,551	....
3 Nagapattinam .. .. .	..	..	..	....	..	..	..	....
4 Tanjore	1	4,000	3,455	....	2	40,800	17,908	....
5 Vellore	3	20,700	20,520	....	..	..	..	....
6 Salem .. .. .	..	..	..	....	53	2,18,400	91,359	....
7 Krishnagiri .. .. .	..	..	..	....	8	78,200	..	....
8 Coleroon Bridge Division ..	..	..	..	....	..	..	..	....
9 Special Division, Villupuram ..	..	..	..	....	..	..	..	....
Total	4	24,700	23,975	....	65	6,42,100	1,36,950	....
Tiruchirappalli Circle.								
10 Tiruchirappalli .. .. .	..	..	..	....	..	..	..	....
11 Madurai	1	98,000	35,868	....	..	..	..	....
12 Ramanathapuram	29	2,97,390	1,92,992	....	4	1,07,700	36,051	....
13 Tirunelveli .. .. .	..	..	..	....	..	..	..	....
14 Erode .. .. .	..	..	..	....	..	..	..	....
15 Coimbatore .. .. .	..	..	..	....	..	..	..	....
16 Ootacamund .. .. .	..	..	..	....	..	..	..	....
Total	30	3,95,390	2,28,860	....	4	1,07,700	36,051	....
West Coast Circle.								
17 Mangalore .. .. .	..	..	..	....	1	13,500	11,242	....
18 Kozhikode .. .. .	..	..	..	....	1	11,000	1,347	....
19 Palghat .. .. .	..	..	..	....	..	..	..	....
20 Special Division, Mangalore ..	..	..	..	....	..	..	..	....
21 Bridges Division, Mangalore ..	..	..	..	....	..	..	..	....
22 Special Division, Kozhikode ..	..	..	..	....	..	..	..	....
Total .. .. .	..	..	..	....	2	24,500	12,589	....
Grand Total	34	4,20,090	2,52,835	....	71	7,74,300	1,85,590	....

ANNEXURE 23—cont.
(ii) Review of works costing less than Rs. 1 lakh each completed during the year 1954-55.

Serial number and name of circle and 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>Madras Circle.</i>								
<i>I. Bridges, culverts and causeways.</i>								
1 Krishnagiri .. .. .	..	..	..	....	..	..	..	....
2 Salem	..	7,660	7,994	....	6	1,59,000	34,903	....
3 Vellore .. .. .	..	..	..	....	2	63,100	67,097	....
4 Saidapet	..	15,000	11,607	....	..	..	..	....
5 Cuddalore	34	5,53,400	2,78,189	....	2	66,100	58,372	....
6 Tanjore .. .. .	..	..	..	....	..	..	..	....
7 Nagapattinam .. .. .	..	..	..	....	6	2,04,570	50,411	....
8 Coleroon Bridge Division .. .. .	..	..	..	....	..	..	..	....
9 Ponnar Bridge Division .. .. .	..	..	..	....	..	..	..	....
10 Transport and Machinery Division .. .. .	..	..	..	....	..	..	..	....
11 Designs Division .. .. .	..	..	..	....	..	..	..	....
Total	41	5,76,060	2,92,790		16	4,92,670	2,10,783	
<i>Tiruchirappalli Circle.</i>								
12 Ramanathapuram	12	59,690	47,313	....	2	3,350	217	....
13 Madurai	1	9,300	9,729	....	..	..	..	....
14 Coimbatore .. .. .	..	..	..	....	6	96,500	78,755	....
15 Tirunelveli	1	20,000	11,708	....	11	1,13,330	4,839	....
16 Tiruchirappalli .. .. .	..	..	..	....	..	..	..	....
17 Erode .. .. .	..	..	..	....	..	..	..	....
18 Ootacamund .. .. .	..	..	..	....	..	..	..	....
Total	14	88,990	63,748		18	2,13,240	83,811	
<i>West Coast Circle.</i>								
19 Mangalore	5	1,03,400	97,369	....	..	..	..	....
20 Kozhikode	1	17,000	13,170	....	..	..	..	....
21 Palghat	11	48,500	43,502	....	..	..	..	....
Total	17	1,68,900	1,54,041		..	..	..	....
22 Special Division West Coast Roads, Mangalore. .. .. .	..	..	..	....	..	..	..	....
23 Special Division West Coast Roads, Kozhikode. .. .. .	..	..	..	....	..	..	..	....
24 Bridges Special Division Mangalore. .. .. .	..	..	..	....	..	..	..	....
Total	17	1,68,900	1,54,041		..	..	..	....
Grand Total	72	8,33,960	5,15,579		34	7,05,900	2,94,599	
<i>Madras Circle.</i>								
<i>II. Cement concrete and black-top works.</i>								
1 Krishnagiri .. .. .	..	..	..	....	..	..	..	....
2 Salem .. .. .	..	..	..	....	..	..	..	....
3 Vellore .. .. .	..	..	..	....	..	..	..	....
4 Saidapet .. .. .	..	..	..	....	..	..	..	....
5 Cuddalore .. .. .	..	..	..	....	..	..	..	....
6 Tanjore .. .. .	..	..	..	....	..	..	..	....
7 Nagapattinam	54	2,97,746	2,97,746	....	..	..	..	....
8 Coleroon Bridge Division .. .. .	..	..	..	....	..	..	..	....
9 Ponnar Bridge Division .. .. .	..	..	..	....	..	..	..	....
10 Transport and Machinery Division .. .. .	..	..	..	....	..	..	..	....
11 Designs Division .. .. .	..	..	..	....	..	..	..	....
Total	54	2,97,746	2,97,746		..	..	..	....
<i>Tiruchirappalli Circle.</i>								
12 Madurai	2	46,000	36,712	....	..	..	..	....
13 Ramanathapuram .. .. .	..	..	..	....	..	..	..	....
14 Tirunelveli .. .. .	..	..	..	....	..	..	..	....
15 Tiruchirappalli .. .. .	..	..	..	....	..	..	..	....
16 Erode .. .. .	..	..	..	....	..	..	..	....
17 Coimbatore .. .. .	..	..	..	....	..	..	..	....
18 Ootacamund .. .. .	..	..	..	....	..	..	..	....
Total	2	46,000	36,712		..	..	..	....

ANNEXURE 23—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during the year 1954-55—cont.

Serial number and name of circle and division.	Government Works.			District Board Works.		
	Total number of works. (1)	Total cost. (2)	Total expenditure. (3)	Remarks. (4)	Total number of works. (5)	Total expenditure. (6)
<i>West Coast Circle, Cannanore.</i>						
19 Mangalore	..	..	..	..	..	..
20 Kozhikode	..	..	..	..	..	..
21 Palghat	..	..	..	..	..	..
22 Special Division West Coast roads, Mangalore.	..	..	..	..	..	..
23 Special Division West Coast roads, Kozhikode.	..	..	..	..	..	..
24 Bridges Special Division, Mangalore.	..	..	..	..	..	..
Total	..	..	..	..	..	..
Grand Total	56	3,43,746	3,34,188			
<i>Madras Circle.</i>						
1 Krishnagiri	..	..	..	..	..	..
2 Salem	..	..	..	..	..	..
3 Vellore	..	..	..	..	..	..
4 Saidapet	..	..	..	..	..	..
5 Cuddalore	..	..	..	..	..	..
6 Tanjore	..	..	..	..	..	..
7 Nagapattinam	..	..	..	..	..	..
8 Coleroon Bridge Division	..	..	..	..	..	..
9 Transport and Machinery Division.	..	..	..	..	..	..
10 Designs Division	..	..	..	..	..	..
Total	..	..	..	..	..	..

III. New formations.

Tiruchirappalli Circle.

11 Ramanathapuram	..	..	..	..	..	..
12 Coimbatore	..	..	..	..	..	..
13 Tirunelveli	..	..	..	..	..	..
14 Ootacamund	..	..	..	..	..	..
15 Tiruchirappalli	..	..	..	..	..	..
Total	..	..	..	..	..	..

West Coast Circle, Cannanore.

16 Mangalore	..	..	..	..	..	..
17 Kozhikode	..	..	..	..	..	..
18 Palghat	..	..	..	..	..	..
19 Special Division West Coast roads, Mangalore.	..	..	..	..	..	..
20 Special Division West Coast roads, Kozhikode.	..	..	..	..	..	..
21 Bridges Special Division, Mangalore.	..	..	..	..	..	..
Total	..	..	..	..	..	..
Grand Total	..	..	..	..	..	..

Madras Circle.

1 Krishnagiri	..	..	..	..	..	..
2 Salem	..	..	..	..	..	..
3 Vellore	..	..	..	..	..	..
4 Saidapet	..	..	..	..	..	..
5 Cuddalore	..	..	..	..	..	..
6 Tanjore	..	..	..	..	..	..
7 Nagapattinam	..	..	..	..	..	..
8 Coleroon Bridge Division	..	..	..	..	..	..
9 Ponnai Bridge Division	..	..	..	..	..	..
10 Transport and Machinery Division.	..	..	..	..	..	..
11 Designs Division	..	..	..	..	..	..
Total	..	..	..	..	..	..

IV. Improvements and special repairs.

1 Krishnagiri	..	..	..	..	..	..
2 Salem	..	..	..	..	..	..
3 Vellore	..	..	..	..	..	..
4 Saidapet	..	..	..	..	..	..
5 Cuddalore	..	..	..	..	..	..
6 Tanjore	..	..	..	..	..	..
7 Nagapattinam	..	..	..	..	..	..
8 Coleroon Bridge Division	..	..	..	..	..	..
9 Ponnai Bridge Division	..	..	..	..	..	..
10 Transport and Machinery Division.	..	..	..	..	..	..
11 Designs Division	..	..	..	..	..	..
Total	..	..	..	..	..	..

ANNEXURE 23—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during the year 1954-55—cont.

Serial number and name of circle and Division.	Government Works.			District Board Works.			Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
	(1)	(2)	(3)	(4)	(5)	(6)					
			RS.	RS.		RS.				RS.	
<i>IV Improvements and special repairs—cont.</i>											
<i>Tiruchirappalli Circle.</i>											
12 Ramanathapuram ..	..	13	60,470	37,463	....	17	4,07,570	3,00,771	....	....	....
13 Tirunelveli ..	..	..	..	..		6	2,85,000	31,125	....	....	....
14 Tiruchirappalli ..	..	..	..	..		..	..	..			
15 Madurai ..	..	..	..	..		..	..	..			
16 Coimbatore ..	..	..	..	..		..	..	..			
17 Erode ..	..	..	..	..		..	..	..			
18 Ootacamund ..	..	..	..	..		..	..	..			
Total ..	..	13	60,470	37,463	....	23	6,92,570	3,31,896	....	....	....
<i>West Coast Circle, Cannanore.</i>											
19 Mangalore ..	..	..	..	..		2	54,500	51,386	....	....	....
20 Kozhikode ..	..	..	..	..		..	..	..			
21 Special Division, West Coast roads, Mangalore ..	..	2	17,000	17,683	....	..	..	..	....	....	....
22 Special Division, West Coast roads, Kozhikode ..	..	..	..	..		..	..	..			
23 Bridges, Special Division, Mangalore ..	..	..	..	..		..	..	..			
24 Palghat ..	..	..	..	..		..	..	..			
Total ..	..	2	17,000	17,683	....	2	54,500	51,386	....	....	....
Grand Total ..	..	20	2,05,470	1,70,216	....	42	9,93,770	5,01,280	....	....	....

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.		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	
			RS.		RS.		RS.		RS.		RS.	
			IN LAKHS.		IN LAKHS.		IN LAKHS.		IN LAKHS.		IN LAKHS.	
<i>(i) Government works.</i>												
1 Steel (in tons) ..	..	1,561.316	12.077	1,171.690	7.152	1,259.400	8.304	1,473.846	9.935	..	..	..
2 Cement (in tons) ..	..	2,954.970	2.621	6,471.550	9.252	6,554.502	81.431	2,841.118	3.442	..	..	..
3 Bitumen (in tons) ..	..	4,793.970	17.225	19,826.860	102.730	16,833.233	75.154	8,736.597	44.201	..	..	..
4 Oils (in gallons) ..	..	12,428.250	0.603	49,841.300	2.331	52,470.990	2.087	9,799.160	1.352	..	..	..
5 Fuel oils (in gallons) ..	..	3,476.350	0.099	38,249.850	2.131	34,647.820	1.917	7,173.380	0.313	..	..	..
6 Coal (in tons) ..	..	622.390	2.214	1,578.400	1.053	1,529.760	1.014	571.030	2.253	..	..	..
7 Timber (in c.ft.) ..	..	..	..	1,134.900	0.908	1,134.900	0.908	..	..	..	..	..
8 Hume pipes (in r.ft.) ..	..	65,680.000	0.489	15,477.000	1.176	5,502.000	0.855	75,595.000	0.808	..	..	..
9 Other materials ..	..	29,201.27	2.405	352.396	11.836	13.500	12.202	29,540.666	2.039	..	..	..
<i>(ii) District Board works.</i>												
1 Steel (in tons) ..	..	460.260	2.272	146.640	1.028	284.650	2.428	322.250	0.372	..	..	..
2 Cement (in tons) ..	..	654.500	0.617	1,233.700	3.860	1,263.190	3.946	625.310	0.631	..	..	..
3 Bitumen (in tons) ..	..	241.390	1.740	873.530	7.139	979.410	7.975	135.510	0.904	..	..	..
4 Oils (in gallons) ..	..	..	..	0.900	0.343	0.900	0.343	..	..	..	..	..
5 Fuel oils (in gallons) ..	..	..	..	0.540	0.006	0.540	0.006	..	..	..	..	..
6 Coal (in tons) ..	..	..	..	..	..	..	..	..	..	..	..	..
7 Timber (in c.ft.) ..	..	120.340	0.010	2.410	0.006	122.750	0.016	..	..	..	..	..
8 Hume pipes (in r.ft.) ..	..	6,316.255	1.252	3,285.100	1.186	4,281.060	1.826	5,320.265	0.612	..	..	..

ANNEXURE 25.

Inventory of plant and machinery as on 31st March 1955.

Serial number, name of plant and machinery.	Number available.	Serial number, name of plant and machinery.	Number available.
MADRAS CIRCLE.			
<i>Salem.</i>			
1 Rollers	18	8 Vibrators	2
2 Lorries	4	9 Barrow Mixers	10
3 Jeep	1	10 Hot Mix Plant	1
4 Heat Masters	9	<i>Nagapattinam.</i>	
5 Drum Mixers	28	1 Rollers	16
6 Concrete Mixers	1	2 Lorries	2
7 Motor Grader	1	3 Jeep	1
8 Vibrator	1	4 Heat Masters	4
<i>Krishnagiri.</i>			
1 Rollers	17	5 Drum Mixers	4
2 Lorries	3	6 Concrete Mixers	1
3 Jeep	1	7 Trailer Carts	5
4 Heat Master	7	<i>Cuddalore.</i>	
5 Drum Mixers	36	1 Rollers	21
6 Concrete Mixers	5	2 Lorries	5
7 Pump Set	2	3 Jeep	1
8 Pile Driving Machine	1	4 Heat Masters	16
9 Cater Pillar	1	5 Drum Mixers	75
10 Barrow Mixers	6	6 Concrete Mixers	7
<i>Vellore.</i>			
1 Rollers	26	7 Vibrators	4
2 Lorries	5	8 Barrow Mixers	4
3 Jeep	1	9 Asphalt Mixer	1
4 Heat Masters	10	<i>Tanjore.</i>	
5 Drum Mixers	54	1 Rollers	19
6 Concrete Mixers	5	2 Lorries	3
7 Vibrator	2	3 Jeep	1
8 Barrow Mixers	12	4 Heat Masters	8
<i>Saidapet.</i>			
1 Rollers	20	5 Drum Mixers	20
2 Lorries	4	6 Concrete Mixers	2
3 Jeep	1	<i>Transport and Machinery Division.</i>	
4 Heat Masters	10	1 Rollers	3
5 Drum Mixers	44	2 Lorries	3
6 Concrete Mixers	2	3 Jeep	1
7 Motor Grader	1	4 Motor Grader	1
WEST COAST CIRCLE.			
<i>Mangalore.</i>			
1 Rollers	25	5 Cater Pillar	1
2 Lorries	8	6 Trailer Cart	1
3 Jeeps	3	7 Tractors	8
4 Concrete Mixers	4	<i>Special Division, West Coast Circle, Mangalore.</i>	
5 Vibrator	1	1 Jeeps	3
6 Hand-drum Mixers	41	2 Calyx Drill	1
7 Barrow Mixers	15	3 Hand-boring Sets	4
8 Water Cart	1	<i>Bridges Division, Mangalore.</i>	
9 Grader	1	1 Calyx drill	1
10 Asphalt Mixer	2	<i>Kozhikode.</i>	
11 Pump Sets	3	1 Rollers	19
12 Air Compressor	1	2 Lorries	5
13 Hand-boring sets	1	3 Jeeps	2
14 Bitumen Boilers	6	4 Tar Boilers	5
		5 Heat Masters	1
		6 Concrete Mixers	5

ANNEXURE 25—cont.

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

Serial number, name of plant and machinery.	Number available.	Serial number, name of plant and machinery.	Number available.
WEST COAST CIRCLE—cont.			
<i>Kozhikode—cont.</i>			
7 Vibrator	1	1 Rollers	24
8 Hand drum mixers	24	2 Lorries	7
9 Grader	1	3 Jeeps	2
10 Asphalt mixer	1	4 Heat masters	8
11 Pump set	1	5 Concrete mixers	4
12 Water tanks	2	6 Vibrator	1
<i>Special Division, West Coast Circle, Kozhikode.</i>			
1 Jeeps	2	7 Hand drum mixers	31
2 Van	1	8 Barrow mixers	4
3 Hand boring sets	2	9 Water cart	1
TIRUCHIRAPPALLI CIRCLE.			
<i>Tiruchirappalli.</i>			
1 Rollers	24	<i>Palghat.</i>	
2 Lorries	12	1 Rollers	24
3 Concrete mixers	5	2 Lorries	7
4 Tar boilers	10	3 Jeeps	2
5 Heat masters	5	4 Heat masters	8
6 Pumps	5	5 Concrete mixers	4
7 Jeeps	1	6 Vibrator	1
8 Grader	2	7 Hand drum mixers	31
9 Air compressors	3	8 Barrow mixers	4
10 Vibrators	1	9 Water cart	1
11 Asphalt mixer	10	<i>Madurai—cont.</i>	
12 Heat spray	10	7 Jeeps	2
<i>Ramanathapuram.</i>			
1 Rollers	24	8 Air compressor	1
2 Lorries	3	<i>Tirunelveli.</i>	
3 Concrete mixers	3	1 Rollers	23
4 Tar boilers	10	2 Lorry	2
5 Borrow mixer	5	3 Concrete mixers	2
6 Hand drum mixers	32	4 Tar boilers	4
7 Heat masters	2	5 Hand drum mixers	38
8 Pumps	2	6 Heat masters	3
9 Jeep	1	7 Pump	1
10 Air compressor	1	8 Welding set	1
11 Vibrator	2	<i>Erode.</i>	
12 Drum mixers	16	1 Rollers	24
<i>Madurai.</i>			
1 Rollers	38	2 Jeep	1
2 Lorries	14	3 Heat masters	2
3 Concrete mixers	3	4 Concrete mixers	2
4 Tar boilers	6	5 Tar boilers	6
5 Heat masters	3	<i>Coimbatore.</i>	
6 Pumps	2	1 Lorries	9
<i>Ootacamund.</i>			
1 Lorries	2	2 Rollers	17
2 Rollers	8	3 Bull dozer	11
3 Jeep	1	4 Grader	1
4 Bitumen boilers	3	5 Van	1
5 Hand drum mixers	14	6 Jeeps	2

ANNEXURE 26.

Statement of avenues.

Serial number and name of circle and 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)
MADRAS CIRCLE.						
1 Chingleput	658	87,638	14,058	11,981	62,297	26,60
2 Cuddalore	562	83,449	5,531	3,470	41,742	69,11
3 Nagapattinam	288	22,840	2,075	1,725	8,143	..
4 Tanjore	402	36,552	3,980	2,765	11,442	17,77
5 Vellore	656	120,828	10,909	7,796	64,837	1,40,85
6 Salem	390	42,833	2,062	1,884	28,898	46,73
7 Krishnagiri	422	50,409	1,757	1,289	20,165	2,23,83
8 Coleroon Bridge Division.	..	..	..	..	..	..
9 Ponnaiar Bridge Division.	..	..	..	..	..	..
10 Transport and Machinery Division.	..	..	..	..	..	..
Total ..	3,378	444,549	40,372	30,910	2,37,524	5,24,923
TIRUCHIRAPPALLI CIRCLE.						
11 Tiruchirappalli	780	1,08,073	4,856	4,570	50,105	67,322
12 Madurai	649	3,207	6,532	1,951	4,811	33,484
13 Ramanathapuram	495	40,902	4,595	2,998	25,596	17,082
14 Tirunelveli	458	37,218	1,998	971	7,569	19,825
15 Erode	498	27,341	14,341	14,034	1,09,992	10,427
16 Coimbatore	521	22,694	1,085	870	8,896	28,751
17 Ootacamund	208	340	340	21	..	300
Total ..	3,609	239,775	33,747	25,415	2,06,969	1,77,191
WEST COAST CIRCLE, CANNANORE.						
18 Mangalore	700	47,551	2,596	1,532	2,209	5,181
19 Kozhikode	362	21,814	1,513	1,396	980	4,532
20 Palghat	623	48,292	4,572	1,919	6,003	32,577
21 Special Division, Mangalore.	..	..	..	..	..	..
22 Special Division, Kozhikode.	..	..	..	..	..	..
23 Bridges Special Division, Mangalore.	..	..	..	..	..	..
Total ..	1,685	1,17,657	8,681	4,847	9,192	42,290
Grand Total ..	8,672	801,981	82,800	61,172	4,53,685	7,44,404

ANNEXURE 26—cont.

Statement of avenues—cont.

Serial number and name of circle and 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)	
MADRAS CIRCLE.						
1 Chingleput	1,084	20,759	1,493	774	3,675	3,189
2 Cuddalore	1,490	55,882	5,918	2,658	17,789	16,919
3 Nagapattinam	1,142	19,265	668	259	5,497	..
4 Tanjore	995	32,543	2,146	2,146	4,669	6,598
5 Vellore	986	65,435	3,650	2,589	13,157	35,845
6 Salem	810	24,566	846	664	7,422	..
7 Krishnagiri	911	39,355	672	18	1,848	2,32,124
8 Coleroon Bridge Division.	..	..	..	..	..	..
9 Ponnaiar Bridge Division.	..	..	..	..	..	..
10 Transport and Machinery.	..	..	..	..	..	..
Total ..	7,418	257,805	15,393	9,108	54,057	2,94,675
TIRUCHIRAPPALLI CIRCLE.						
11 Tiruchirappalli	1,811	46,210	1,770	1,239	27,937	9,539
12 Madurai	1,511	3,234	2,873	1,224	..	6,444
13 Ramanathapuram	1,067	23,341	2,899	1,715	15,709	4,674
14 Tirunelveli	1,125	30,775	1,879	1,577	6,843	..
15 Erode	1,595	20,435	1,681	1,681	5,541	6,250
16 Coimbatore	1,076	8,902	269	164	1,178	..
17 Ootacamund	310	..	..	..	..	..
Total ..	8,495	13,897	11,371	7,600	57,208	26,907
WEST COAST CIRCLE, CANNANORE.						
18 Mangalore	791	39,081	1,215	874	..	2,030
19 Kozhikode	514	24,864	364	104	415	3,972
20 Palghat	494	14,970	1,430	419	1,206	5,580
21 Special Division, Mangalore.	..	..	..	..	..	..
22 Special Division, Kozhikode.	..	..	..	..	..	..
23 Bridges Special Division, Mangalore.	..	..	..	..	..	..
Total ..	1,799	78,915	3,009	1,397	1,621	11,582
Grand Total ..	17,712	489,617	29,773	18,105	1,12,886	3,33,164

ANNEXURE 28.

Statement showing the particulars of ferries maintained by this department.

Name of division. (1)	Serial number and name of ferry. (2)	Number and size of boat available. (3)	Revenue (lease amount) (4)
			RS.
Mangalore	1. Bolar	6 boats of 27' x 24' x 2" ..	10
	2. Pavanje	8 do. ..	18,740
	3. Mulky	8 do. ..	16,600
	4. Chandragiri	5 do. ..	1,020
	5. Shirur	2 do. ..	390
	6. Kariangote	2 do. ..	1,500
	7. Chittara	2 do. ..	1,020
	8. Mograi	2 do. ..	990
	9. Karumpuzha	2 do. ..	820
	10. Uppala	2 do. ..	410
	11. Bokal	2 do. ..	980
	12. Kollathkere	2 do. ..	4,800
	13. Thekkil	2 do. ..	Ferry closed.
	14. Hosnut	2 do. ..	05
	15. Mabukkal	10 do. ..	13,005
	16. Bhadrasingiri	10 do. ..	12,070
	17. Udiavar	10 do. ..	85,500 *
	18. Puttige	2 do. ..	500 †
	19. Gangoli	7 do. ..	25,000 ‡
	20. Hongahole	2 do. ..	14,005
	21. Kandhalur	2 do. ..	675
	22. Wandse	2 do. ..	620
	23. Jadkal	1 do. ..	200
	24. Poochnogor	2 do. ..	110
	25. Malpe	2 do. ..	1,200
	26. Sonda	2 do. ..	360
	27. Halady	2 do. ..	500
Kannur	28. Baliapatam	3 boats of 25' x 44' x 24' and 1 jangadam.	65,474
	29. Kuppam	3 boats of 25' x 44' x 24' and 1 jangadam.	
	30. Pannamaram	1 boat of 30' x 24' x 24' and 1 jangadam.	
	31. Chaliur	2 boats of 25' x 44' x 24' and 1 jangadam.	
	32. Perumbai	3 boats of 25' x 44' x 24' and 1 jangadam.	
Palghat	33. Kurimpuzha	2 boats of 20' x 34' x 14' ..	1,000
	34. Chunnagad	2 do. ..	42
	35. Nangabatri	2 do. ..	6,100
	36. Thiruthala Varadakutti kadavu.	2 do. ..	1,265
	37. Chamaravattam	2 do. ..	3,040
	38. Mallur alias Chattanpara	No sold on account of want of bidders. Ferry has been proposed for closure.	
Ramanathapuram	39. Kottagudi	1 boat of 20' x 8' x 14' ..	225
Madurai	40. Narikalpatti	1 boat of 7' x 5' x 6' ..	15
	41. Perichipalayam	1 do. ..	
	42. Mavurghat	1 do. ..	
Tirunelveli	43. Vilatikulam	1 boat of 32' x 54' x 2' ..	20
Tiruchirappalli	44. Kamanalampalayam	4 of 12' diameter ..	16,249
	45. Manapalli (Nanniyur)	3 do. ..	
	46. Kuitalai (Musiri)	8 do. ..	
	47. Tirumannur	6 do. ..	
	48. Tirumalayadi, Vythinathanpettai.	4 do. ..	
Krishnagiri	49. Irumathur .. ..	.....	19
Nagapattinam	50. Gopalasamudram across Cole- roon at M. 42/3 of M.D.R. 3.	1 boat of 25' x 8' ..	1,020
	51. Engan across Vettar	1 do. ..	19
	52. Elangudi across Odambokiar.	1 do. ..	55
Uddalore	53. Ferry at M. 1/1 of Markanam- Tindivanam road.	1 Ramped cargo lighter ..	25
			4,780
Tanjore	54. Sundaraperumalkoil	1 boat of 10' diameter x 3' ..	150
	55. Parithikudi	1 boat of 12' x 4' x 3' ..	80
		Total ..	2,79,089

* Lease for three years from 1st April 1953.

† Bridge opened on 1st June 1954.

‡ Lease for five years up to 30th September 1954 and Rs. 26,000 for 4½ years from 1st October 1954.

ANNEXURE 29.

(i) Statement showing the names of Inspection Bungalows taken over during the year 1954-55.

(1) West Coast Circle	Nil.
(2) Tiruchirappalli Circle	Nil.
(3) Madras Circle	Nil.

(ii) Statement showing the Inspection Bungalows maintained during the year 1954-55.

Serial number and name of division. (1)	Class I. (2)	Class II. (3)	Class III. (4)	Rest-houses. (5)	Revenue. (6)	Cost of maintenance. (7)
					RS.	RS.
1 Mangalore	1	6	..	..	735	2,716
2 Kozhikode	..	2	..	..	36	721
3 Palghat	..	..	..	..	..	..
4 Ramanathapuram	..	..	..	..	13	699
5 Madurai	1	..	..	..	114	748
6 Coimbatore	..	2	..	..	..	..
7 Tirunelveli	..	..	..	..	..	..
8 Erode	..	2	..	..	279	1,890
9 Ootacamund	..	6	..	..	1,433	5,344
10 Tiruchirappalli	..	..	..	..	..	..
11 Tanjore	..	..	..	..	..	..
12 Krishnagiri	..	..	..	..	265	2,072
13 Salem	1	..	..	..	..	..
14 Vellore	..	..	..	..	..	..
15 Nagapattinam	..	..	..	..	..	..
16 Cuddalore	..	..	..	..	..	..
17 Saidapet	..	..	..	..	..	..
Total	3	18	..	..	2,875	14,210

(iii) Statement showing the names of Travellers' Bungalows taken over during the year 1954-55.

(1) Wet Coast Circle	Nil.
(2) Tiruchirappalli Circle	Nil.
(3) Madras Circle	Nil.

(iv) Statement showing the Travellers' Bungalows maintained during the year 1954-55.

Serial number and name of division. (1)	Class I. (2)	Class II. (3)	Class III. (4)	Rest houses. (5)	Revenue. (6)	Cost of maintenance. (7)
					RS.	RS.
1 Mangalore	7	12	12	30	5,999	26,502
2 Kozhikode	1	14	4	..	1,637	11,932
3 Palghat	..	26	..	5	2,857	10,532
4 Ramanathapuram	7	7	..	2	6,649	14,478
5 Madurai	3	9	4	..	3,883	15,731
6 Coimbatore	..	9	..	9	6,722 *	5,911
7 Tirunelveli	..	9	..	6	2,502	5,839
8 Erode	3	5	1	7	*	12,362
9 Tiruchirappalli	..	..	..	12	2,633	10,536
10 Ootacamund	..	3	..	..	354	1,327
11 Vellore	..	8	..	1	5,401 †	16,014
12 Salem	..	11	..	2	†	6,042
13 Krishnagiri	1	..	..	9	1,037	2,460
14 Tanjore	..	2	3	..	878	1,649
15 Nagapattinam	..	6	..	7	4,018	16,953
16 Cuddalore	2	..	..	(inspection sheds.)	533	3,109
17 Saidapet	..	..	..	..	..	..
Total	26	129	24	92	45,103	1,62,376

* Rs. 6,722 includes income derived in respect of Travellers' Bungalows in Erode Division also.

† Rs. 5,401 includes income derived in respect of Travellers' Bungalows in Krishnagiri Division.

ADMINISTRATION REPORT OF THE

HIGHWAYS DEPARTMENT, 1954-55

127

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 of road.
1 Chingleput ..	..	3,103	1,742	1.78	3,289,675	1,877	914	..	44,93,185	2,579	34,87,504	2,602
2 South Arcot ..	..	4,204	2,052	2.05	2,776,767	1,353	92,720	45	30,33,150	1,705	75,55,094	3,081
3 Tanjore ..	..	3,740	2,327	1.82	2,952,670	1,055	98,000	85	39,49,491	1,397	1,25,05,307	4,423
4 Tiruchirappalli ..	..	5,514	2,591	2.13	2,943,682	1,136	51,582	20	39,72,428	1,533	68,91,421	2,467
5 Madurai ..	..	4,910	2,160	2.27	2,891,17	1,339	50,050	23	40,48,584	1,872	41,53,656	1,923
6 Ramanathapuram ..	..	4,849	1,662	3.10	2,000,619	1,302	37,455	24	34,77,600	2,219	6,52,873	590
7 Tirunelveli ..	..	4,843	1,583	2.74	2,445,967	1,545	7,457	5	27,27,630	1,723	37,60,848	2,375
8 Salem ..	..	4,654	1,642	2.83	2,559,157	1,741	48,532	29	22,85,428	1,392	42,90,748	2,613
9 Coimbatore ..	..	7,051	2,333	2.78	3,871,769	1,331	111,677	44	39,56,906	1,562	40,28,572	1,500
10 The Nilgiris ..	..	7,090	3,690	1.92	3,293,204	892	66,441	18	59,03,810	1,618	62,18,096	1,685
11 The Nilgiris ..	..	984	518	1.89	3,11,729	602	855	2	5,21,590	1,006	3,05,628	590
12 Malabar ..	..	3,844	1,993	1.93	4,758,342	2,383	48,772	24	50,05,156	2,511	66,00,735	3,312
13 South Kanara ..	..	4,044	1,491	2.71	1,748,991	1,173	1,720	1	32,15,045	2,156	33,22,859	2,564
14 Transport and Machinery Division.	..	..	..	..	..	..	..	..	63,667	..	..	..
Total ..	..	60,330	26,384	2.24	35,734,489	1,854	616,175	23	4,69,98,380	1,781	6,40,63,443	2,429

NOTE.—(1) The particulars in respect of columns 2 and 5 were adopted from the District Census Hand Book, 1951.
 (2) (a) The revenue figures noted in column 11 are on the basis of information obtained from the Board of Revenue.
 (b) The amount of Rs. 34,87,594 against Chingleput district includes revenue of Rs. 3,09,692 for Madras district.

ANNEXURE 31.

Statement showing the numerical strength of employees in the department as on 31st March 1955.

Serial number and name of circle and division.	Number of employees in each category.										Total.
	Administration.	Engineering.	Ministerial.	Last grade service.	Menials paid from contingencies.	Plant operators.	Workshops.	Petty supervisors.	Other work-charged establishment.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Madras Circle.											
1 Circle Office ..	1	12	24	9	4	..	..	..	..	50	
2 Salem ..	..	27	32	28	7	52	..	117	500	763	
3 Krishnagiri ..	..	20	31	21	14	36	2	97	307	528	
4 Cuddalore ..	..	24	54	45	21	54	5	177	618	1,008	
5 Tanjore ..	..	20	26	26	12	40	4	131	343	602	
6 Designs Division ..	..	10	5	6	2	..	..	..	..	23	
7 Special Division, Ponnalar at Villupuram.	..	4	8	3	..	..	..	..	8	23	
8 Vellore ..	..	33	25	49	10	61	..	137	528	848	
9 Saidapet ..	..	40	50	37	13	49	..	141	461	781	
10 Nagapattinam ..	..	17	38	24	9	14	2	98	300	502	
11 Transport and Machinery Division.	..	16	21	9	2	91	269	..	..	408	
12 Coleroon Bridge Division ..	..	6	8	5	2	2	..	16	6	46	
Total ..	1	249	322	262	97	399	282	914	3,061	5,577	
Tiruchirappalli Circle.											
13 Circle Office ..	1	9	20	8	3	..	..	..	..	41	
14 Ramanathapuram ..	..	26	38	25	9	52	6	130	598	884	
15 Madurai ..	..	33	51	38	8	83	6	159	600	978	
16 Coimbatore ..	..	35	43	27	9	47	42	91	183	677	
17 Tirunelveli ..	..	30	39	33	20	40	..	143	700	1,005	
18 Erode ..	..	25	39	29	9	47	..	115	285	549	
19 Oorahund ..	..	12	20	13	1	10	..	29	117	202	
20 Tiruchirappalli ..	..	41	58	49	19	66	16	154	897	1,300	
Total ..	1	211	308	222	78	345	70	821	3,580	5,636	
West Coast Circle.											
21 Circle Office ..	1	11	9	7	4	..	..	..	..	32	
22 South Kanara Division ..	..	25	27	34	9	49	..	106	328	539	
23 Special Division, West Coast Roads, Mangalore.	..	14	7	14	8	3	..	18	2	66	
24 Bridges Division, Mangalore.	..	8	6	9	1	2	..	..	..	26	
25 Kozhikode Division ..	..	24	28	28	7	60	1	83	304	535	
26 Special Division, West Coast Roads, Kozhikode.	..	14	8	14	5	3	..	..	1	45	
27 Palghat Division ..	..	21	32	22	9	59	..	100	356	599	
Total ..	1	127	117	128	43	176	1	307	991	1,891	
28 Office of the Chief Engineer (Highways).	..	44*	12	30	..	..	..	..	..	177	
29 Director, Research Station ..	..	5	2	5	..	..	..	..	..	12	
Grand total ..	4	626	851	647	218	920	353	2,042	7,632	13,298	

NOTE.—(1) *The figure 44 includes the Accounts Officer (Highways).
 (2) Figures in column (4) include 11 technical personnel from Divisional Engineers (Highways) down to tracings.
 (3) Column (9) "Petty supervisors" represents mostly Road Inspectors.
 (4) Column (10) "Other work-charged establishment" represents mainly Gang-mazdoors.

ANNEXURE 32.
Districtwise Statistics.

Serial number and name of district.	(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 Sub-Divisions.	Number of sections.	Number of villages less than 500	Number of villages more than 500	Number of Panchayats (Major).	Number of Municipalities.	Number of Blocks under National Extension Scheme and Community Projects.	Length of Government roads as on 31st March 1955.	Length of District Board roads as on 31st March 1955.
1 Chingleput	..	3,103	3,269,675	914	1	8	21	906	1,031	16	8	4	658	1,084
2 North Arcot	..	4,654	2,859,157	48,532	1	6	18	307	1,130	14	8	3	756	988
3 South Arcot	..	4,204	2,776,767	92,720	2	8	26	560	1,702	11	4	4	562	1,490
4 Salem	..	7,051	3,371,789	1,11,877	2	7	22	435	1,370	16	3	3	812	1,721
5 Tiruchirappalli	..	5,514	2,943,882	51,582	1	6	32*	334	1,179	23	4	4	780	1,811
6 Tanjore	..	3,740	2,982,670	98,000	3	8	35	774	1,506	23	6	2	608	2,137
7 Madurai	..	4,910	2,891,317	50,050	1	6	21	242	860	20	6	4	610	1,511
8 Ramnathapuram	..	4,849	2,080,519	37,455	1	6	14	1,354	863	23	7	3	495	1,067
9 Tirunelveli	..	4,343	2,445,967	7,457	1	5	15	189	829	37	4	4	453	1,125
10 Coimbatore	..	7,000	3,293,204	66,441	2	8	37†	104	914	14	8	3	1,019	2,671
11 The Nilgiris	..	984	3,11,729	835	1	1	6	5	45	1	2	2	268	310
12 Malabar	..	5,844	4,758,342	48,772	3	12	31	217	1,232	9	5	3	935	1,668
13 South Kanara	..	4,044	1,742,991	1,720	3	13	29	24	618	6	2	3	700	791
14 Madras	..	..	..	..	2	..	..	..	..	..	..	..	..	..
Total	..	60,330	35,734,489	6,18,175	24	92	307	6,043	14,742	219	89	42	8,072	17,512

Serial number and name of district	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
	Total length of all roads.	Length of National Highways.	Length of State Highways.	Length of Major district roads.	Length of Other District roads.	Length of village roads.	Revenue of the district.	Land Cess payable District Board.	Minimum allotment for Government Roads other than National Highways.	Average rate per mile of roads other than National Highways.	Minimum allotment for District Board Roads.	Average rate per mile.
1 Chingleput	1,742	133	73	581	279	749	34,87,594	5,44,937	16,70,880	3,182	..	..
2 North Arcot	1,642	164	80	602	462	401	42,07,743	6,70,129	17,65,880	3,189	..	..
3 South Arcot	2,053	202	90	672	499	765	75,66,094	21,78,483	14,49,880	3,046	..	..
4 Salem	2,837	131	190	835	701	613	40,28,572	6,29,444	16,46,860	2,700	..	..
5 Tiruchirappalli	2,897	110	170	696	540	1,034	6,91,421	9,98,690	20,13,170	3,067	..	..
6 Tanjore	2,467	110	65	532	348	1,127	1,25,16,307	19,19,664	25,69,130	3,239	..	..
7 Madurai	1,760	167	71	571	323	1,089	41,53,606	6,86,200	16,81,450	3,220	..	..
8 Ramnathapuram	1,592	86	97	571	323	471	9,22,875	1,44,199	12,46,840	3,297	..	..
9 Tirunelveli	1,363	78	135	776	663	443	8,60,848	6,87,638	11,40,670	3,297	..	..
10 Coimbatore	3,946	..	104	1,194	86	236	6,18,096	9,77,678	29,14,360	3,118	..	..
11 The Nilgiris	1,938	42	338	827	395	391	3,05,623	47,754	6,85,780	3,071	..	..
12 Malabar	1,938	..	220	505	283	423	66,00,735	10,31,365	22,11,360	3,402	..	..
13 South Kanara	1,491	..	..	..	..	..	38,12,669	6,97,322	23,73,130	3,390	..	..
14 Madras	..	..	..	..	..	..	..	..	..	..	..	..
Total	26,334	1,088	1,668	9,151	5,235	9,212	6,40,6,443	1,00,27,368	2,43,23,090	3,207	..	..

* Includes 7 Mts for vehicle supervisors.

† Includes 7 Mechanical, Motor Vehicle Supervisors and 2 sections for bridges.

NOTE—(1) Figures in columns 2, 3, 4, 8, 9, 10 and 11 were adopted from the District Census Hand Book, 1951.

(2) Revenue figures in column 21 were adopted from the particulars furnished by the Board of Revenue.

(3) The land cess payable to District Board in column 22 was worked out at Rs. 0-2-0 per rupee.

Not available.

ANNEXURE 33. Districtwise Cost Index.

Maintenance.

Serial number and name of division.	Government.				District Board.			
	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)	Percentage (+) or (-), (9)
Madras Circle.								
1 Krishnagiri	130	5,95,102	6,35,164	+	136	4,30,827	4,62,537	3.8
2 Salem	113	3,21,708	10,99,473	31.1	172	4,20,493	3,65,136	13.2
3 Vellore	174	12,76,502	7,37,429	37.5	139	3,69,938	3,02,722	18.2
4 Chingleput	118	11,69,970	9,99,875	18.7	24	1,35,303	1,03,465	16.1
5 Cuddalore	184	19,68,698	11,60,100	40.3	297	9,14,641	6,07,743	33.7
6 Nagapattinam	172	9,57,550	6,35,280	33.4	214	3,69,180	3,31,842	4.7
7 Tirunelveli	140	7,57,136	7,35,260	2.9	142	4,76,705	3,99,975	16.0
8 Coleroon Bridge Division	..	..	..	..	..	..	..	..
9 Palar Bridge Division	..	..	..	..	..	..	..	..
10 Transport and Machinery	..	..	..	..	..	..	..	..
11 Designs Division	..	..	..	..	..	..	..	..
Total	971	71,84,577	60,53,591	- 15.7	1,124	31,67,097	25,93,420	- 18.1
Tiruchirappalli Circle.								
12 Tiruchirappalli	329	25,07,400	14,30,456	- 43.0	318	9,93,132	8,07,032	12.7
13 Madurai	113	11,44,680	9,76,436	- 14.7	130	9,04,556	8,70,556	12.3
14 Ramnathapuram	247	15,35,540	14,99,426	- 18.3	131	9,30,920	8,78,176	13.6
15 Tirunelveli	105	10,67,238	9,08,687	- 15.0	154	9,44,780	8,69,970	7.9
16 Coimbatore	156	11,06,810	9,01,696	- 23.0	217	7,36,650	8,26,138	11.0
17 Erode	63	12,53,102	11,24,267	- 11.5	147	7,39,352	9,73,633	31.0
18 Ootacamund	116	2,43,197	2,31,383	- 6.81	97	1,56,048	1,86,680	4.96
Total	1,134	92,52,957	70,70,356	- 23.6	1,230	48,87,357	36,38,290	- 21.5
West Coast Circle, Cannanore.								
19 Mangalore	135	13,79,745	14,21,133	+	90	2,24,993	2,34,993	..
20 Kozhikode	296	20,61,315	18,99,166	- 8.0	174	4,77,535	4,30,026	- 8.0
21 Palghat	..	..	..	..	..	..	..	..
22 Special Division, West Coast Road, Mangalore	..	..	..	..	..	..	..	..
23 Special Division, West Coast Road, Kozhikode	..	..	..	..	..	..	..	..
24 Special Division, West Coast Road, Mangalore	..	..	..	..	..	..	..	..
25 Special Division, West Coast Road, Kozhikode	..	..	..	..	..	..	..	..
26 Bridges Division, Mangalore	..	..	..	..	..	..	..	..
Total	431	34,44,060	33,20,304	- 3.6	273	7,02,578	6,64,010	- 5.5
Grand total	2,566	1,93,81,594	1,64,44,251	- 17.2	2,636	87,57,032	69,45,729	- 20.7

Serial number and name of division.	Government.				District Board.			
	Number of works let on contract, (10)	Total Estimate cost, (11)	Total contract value, (12)	Percentage (+) or (-), (13)	Number of works let on contract, (14)	Total Estimate cost, (15)	Total contract value, (16)	Percentage (+) or (-), (17)
Madras Circle.								
1 Krishnagiri	..	..	..	..	..	..	..	..
2 Salem	1	2,330	2,161	- 7.3	5	40,000	47,025	+ 15.8
3 Vellore	..	..	..	..	..	..	..	..
4 Chingleput	3	1,51,132	1,22,354	- 21	1	39,485	35,989	- 8.9
5 Cuddalore	31	3,94,931	2,28,975	- 42.1	7	77,419	77,419	..
6 Nagapattinam	..	..	..	..	30	88,400	88,400	..
7 Tirunelveli	..	..	..	..	..	7,88,489	8,83,476	+ 11.9
8 Coleroon Bridge Division	..	..	..	..	..	4,550	4,500	- 1.1
9 Palar Bridge Division	..	..	..	..	..	..	..	..
10 Transport and Machinery	..	..	..	..	..	..	..	..
11 Designs Division	..	..	..	..	..	..	..	..
Total	43	28,46,203	25,31,834	- 11.0	46	9,61,515	5,48,389	- 43.9
Tiruchirappalli Circle.								
12 Tiruchirappalli	..	..	..	..	..	..	..	..
13 Madurai	1	3,05,000	1,55,000	- 49	26	2,01,700	2,01,726	..
14 Ramnathapuram	14	4,57,000	3,62,229	- 20.5	14	1,63,506	1,25,345	- 23.3
15 Tirunelveli	10	2,07,213	1,60,507	- 41.0	8	30,000	46,337	+ 55.4
16 Coimbatore	..	..	..	..	45	9,92,211	9,28,505	- 6.4
17 Erode	13	65,013	64,442	- 0.9	25	1,51,079	1,39,703	- 7.5
18 Ootacamund	..	..	..	..	..	..	..	..
Total	49	12,08,631	8,42,370	- 30.3	119	15,39,560	14,41,616	- 6.4
West Coast Circle, Cannanore.								
19 Mangalore	23	8,03,420	8,10,483	+ 2.0	2	42,300	30,033	- 29.0
20 Kozhikode	13	4,93,993	5,13,939	+ 3.9	2	1,99,310	1,07,851	- 1.0
21 Palghat	..	..	..	..	..	..	..	..
22 Special Division, West Coast Road, Mangalore	..	..	..	..	..	..	..	..
23 Special Division, West Coast Road, Kozhikode	..	..	..	..	..	..	..	..
24 Special Division, West Coast Road, Mangalore	..	..	..	..	..	..	..	..
25 Special Division, West Coast Road, Kozhikode	..	..	..	..	..	..	..	..
26 Bridges Division, Mangalore	..	..	..	..	..	..	..	..
Total	41	12,97,323	13,38,413	+ 3.1	4	2,42,110	2,27,834	- 5.9
Grand total	133	53,52,552	47,13,672	- 10.0	169	27,43,185	22,18,339	- 19.1