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59

ANNUAL REPORT
ON THE
PUBLIC WORKS DEPARTMENT
FOR THE YEAR 1953-54

NINEPENCE NETT

LAGOS: FEDERAL GOVERNMENT PRINTER

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FOREWORD

The portfolio of Works is one of keen interest not only to the Minister but also to the Nigerian public. To-day the economic and social services of our country are being expanded and developed on a scale which would have been incredible before the war, and the Public Works Department is directly concerned in most aspects of this expansion. Indeed, there are few schemes of development which do not, at some point, require the services of the Department whether it is to provide buildings or roads, water supplies or bridges. The best evidence of public interest in its various works is given by the phenomenal number of questions which the Minister of Works has to answer at each meeting of the House of Representatives.

I am proud of the record given in this report but there is one feature of it which causes me concern. The Public Works Department offers an honourable career of direct service to our country but, so far, few young men have chosen to take up engineering as their profession, in spite of the fact that the Department has suffered from shortage of staff ever since the end of the war. I take the opportunity of this foreword to appeal to young Nigerians to consider seriously the possibility of choosing engineering as their profession in life. It is, indeed, disappointing to read in this report that only one Nigerian, out of the many receiving higher education, selected the profession of an Executive Engineer in 1953-54.

After reading this Report I think you will agree with me that the achievements of the Department during 1953-54 were remarkable considering the staffing difficulties. Over 2 million pounds worth of buildings were completed, including the House of Representatives and Supreme Court in Lagos. Over 3 million pounds worth of buildings were in the planning stage, including the University College Hospital at Ibadan. Over 200 miles of trunk roads were tarred. Nearly 84,000 feet of wells and 9,000 feet of boreholes were sunk in the Northern Region.

In conclusion I would like to commend the Director and Staff of the Department for a fine record of achievement during 1953-54 and the Report itself as a challenge to all right thinking people in this country.

M. INUWA WADA,
Federal Minister of Works

Annual Report on the Public Works Department for the year 1953-54

CHAPTER I—INTRODUCTORY

The general organisation of the Department remained the same as in the previous year. This is the last comprehensive report on Public Works in Nigeria. Following on constitutional changes separate reports will be published for the year 1954-55 on the work of the Regional Public Works Departments.

2. On 1st March, 1954, the portfolio of Minister of Works was taken over from the late Chief Bode Thomas by the Hon. F. O. Awosika.

3. Appendix I to this Report records a further increase in the total expenditure of the Department. Figures for three years are as follows:—

	£
Total expenditure 1951-52	7,409,358
Total expenditure 1952-53	10,430,250
Total expenditure 1953-54	11,576,601
Increase 1953-54 over 1952-53	<u>£1,146,351 (11%)</u>

4. Table I below compares the expenditure in detail with that of some previous years. These figures do not include overhead charges.

TABLE I

	1938-39		1944-45		1951-52		1953-54	
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent
	£		£		£		£	
Staff and Other Charges—								
All Heads	185,000	14.8	271,557	14.8	856,302	11.9	1,191,212	11.5
Recurrent Works	321,000	25.6	462,411	25.2	1,355,332	18.9	2,032,082	19.4
Public Works Extraordinary and Renewals	245,000	19.6	395,162	21.6	2,017,790	28.3	3,527,698	33.7
Development Works	—	—	14,704	.7	2,025,276	28.4	2,625,078	25.2
Works for Native Administrations	500,000	40.0	247,472	13.6	774,039	10.7	867,248	8.3
Military Works and other Departments	—	—	440,553	24.1	129,410	1.8	198,479	1.9
Totals	1,251,000	100	1,831,859	100	7,158,149	100	10,441,797	100

The trend of expenditure is also shown in Figure 1.

5. Overhead Costs amounted to 15.6 per cent of work done, as against 15.9 per cent in the previous year and 14.9 per cent in 1951-52.

6. The financial responsibility for the expenditure shown in Appendix 'I' is divided as follows:—

	£
Nigerian Government	4,183,593
Northern Regional Government	3,852,242
Western Regional Government	2,344,672
Eastern Regional Government	1,196,094
	<u>£11,576,601</u>

A large part of the work financed by the Nigerian Government was carried out by the Regional Public Works Departments, acting as agents.

7. *Development Plan.*—Table II below shows the 1953-54 expenditure, and Appendix V at the back of the report gives the total expenditure under the Ten Year Plan to the end of the year.

TABLE II

	<i>Roads</i>	<i>Rural Water Supplies</i>	<i>Urban Water Supplies</i>	<i>Building Programme</i>	<i>Other Programmes</i>	<i>Total</i>
	£	£	£	£	£	£
Staff	96,726	134,266	59,588	109,001	—	399,581
Plant	122,016	102,036	40,359	56,040	—	320,451
Cost of Works	1,279,762	227,568	167,007	929,354	21,387	2,625,078
Total	£ 1,498,504	463,870	266,954	1,094,395	21,387	3,345,110

There was an increase of 13 per cent over the total expenditure in 1952-53 and progress on all schemes was very satisfactory.

8. *Senior Staff.*—Details will be found in Chapter II. The percentage of posts filled is 4 per cent higher than in the previous year but the situation remains serious, especially in the grades of executive engineer and accountant. Early retirements continue to reduce the proportion of experienced staff.

9. *Junior Staff.*—Details are given in Chapter II. There has been a serious falling off in the numbers of clerks and engineering assistants owing mainly to difficulty in recruitment.

10. *Training of Engineering Assistants.*—The Public Works Department School was closed during the year, after running continuously for twenty-three years, and the courses were taken over by the Technical Institute at Yaba, under the Education Department. Before 1930 there was no institution which could train subordinate technical staff, whose training was limited to the occasional instruction that an engineer could give to his assistants during the course of their work. In 1930, temporary buildings were erected in Lagos, and a civil engineer was posted to open a school. The men trained very quickly proved their value, and as soon as they became known there was an increasing demand for them from the provinces. Training has been continuous and the school has several times been enlarged, and there is no doubt that it has been of very material help to the development of Nigeria. Most of those trained have proved reliable practical men, who have given and are giving valuable service. In recent years they have provided a field for recruitment to the senior grade of Inspector of Works and some have obtained scholarships for further training to fit them for the post of Executive Engineer.

11. *Stores and Materials.*—Chapter XI shows that the values of turnover and of stock balance have remained about the same as in previous years. Supplies from overseas were maintained with little difficulty, and internal distribution, except for some difficulty at times in obtaining railway wagons, was fairly good. A satisfactory feature is the reduction in losses by theft, owing to increased security measures.

12. *Costs of Works.*—Costs remained fairly stable throughout the year.

13. *Buildings.*—Details are given in Chapters III and IV. The value of new buildings completed during the year was a little over £2,000,000. The most important buildings completed during the year were the Supreme Court, Lagos (£420,000) and the House of Representatives (£158,000). Two large projects were in the planning

stage, the Terminal Building for Kano Airport, estimated at £300,000, and the Ibadan University College Hospital, which will cost with ancillary buildings at least £3,000,000. In the latter project, work is proceeding on the staff quarters and preliminaries.

14. *Roads*.—Reference to Chapter V will show that good progress was made in road construction and reconstruction. A bituminous surface was laid on over 200 miles of trunk roads, and bridges totalling over 8,000 feet were completed. About half of this bridging was on new roads, and the remainder replaced old temporary bridges. Traffic census, registration of vehicles and petrol consumption, as shown in Chapter V, indicate that the rate of increase of traffic was more than maintained. There is much room for improvement, but in view of the heavy arrears of maintenance owing to the War, and to continuous shortage of staff, it is a remarkable achievement that very few roads have completely failed to carry the traffic, and that the few that have so failed have been quickly repaired.

15. *Aerodromes*.—All airfields were kept in commission throughout the year, and the number of landings remained about the same as in the previous year. The most important development was the completion of plans for a new terminal building at Kano, estimated to cost over £300,000. The inadequacy of terminal buildings at other stations is receiving consideration. See Chapter VI.

16. *Water Supplies*.—Chapter VIII gives all particulars. Good progress was made with construction and extensions, but it was greatly retarded by staff shortage, and by slow delivery of plant and materials, and output has not by a long way caught up with demands. The progress of rural water supply construction continued to improve in the Northern Region, where nearly 84,000 feet of wells and 9,000 feet of boreholes were sunk during the year.

17. *Mechanical and Electrical Branch*.—See Chapter IX. Though the establishment for engineers and inspectors was increased to ninety-six actual strength fell by five, resulting in 31 per cent of posts in the senior staff remaining unfilled. Sixty junior staff attended upgrading courses at the Mechanical School at Abeokuta. A school was also opened for operators of heavy earth moving equipment, courses lasting about one month with special emphasis on maintenance. The success of these training schemes has exceeded the most sanguine expectations. The Air Conditioning and Refrigeration Section was working to full capacity on maintenance and new installations. Work on eight more major installations will start next year. The general supply position eased considerably with the exception of spare parts. The recently formed Electrical Section has been of the utmost value in planning both major and minor installations and plans are in hand to increase its scope and functions considerably.

18. *Sawmills and Woodworking Shops*.—Chapter X records a reduction in output of sawn timber, owing to lower demands from other departments and from the public. Improvements to the sawmills continued.

19. *Conferences*.—The ninth conference of West African Directors of Public Works was held in Lagos in February. The annual conference of Nigerian Directors of Public Works was held in April. In the Northern Region a conference of Provincial Engineers was held at Jos in May.

20. The enthusiastic and co-operative support of officers of the Department at all levels has been well maintained and I am happy to be able to report an excellent spirit and morale in the Department, without which little would have been achieved.

K. P. HUMPIDGE, B.Sc., M.I.C.E.,
Director of Federal Public Works

CHAPTER II—STAFF

Senior Staff.—The authorised establishment at the beginning of the year and the actual strength at 31st March, 1954, are given in the following table.

TABLE III

	CENTRAL		NORTH		WEST		EAST		TOTAL											
	Perm.	Actual	Perm.	Actual	Perm.	Actual	Perm.	Actual	Permanent	Temporary										
Engineers	33	26	51	46	28	10	23	7	146	123	84	67	51	2	76					
Architects	8	6	3	3	3	1	1	2	15	13	87	18	17	94						
Works Manager and Assistant Works Managers	4	4	6	7	5	—	2	—	18	17	94	—	—	—						
Drilling Superintendents	—	—	—	—	4	2	—	1	—	—	—	3	—	—	67					
Inspector Grade and Drillers	20	14	45	38	31	85	16	29	119	96	81	164	146	89						
Accountants	5	5	7	5	4	2	3	2	19	16	84	9	7	78						
Storekeepers and Stock Verifiers	23	22	—	—	3	—	3	—	19	16	84	9	7	78						
Labour Relations Officer	1	1	—	—	—	—	—	—	23	22	96	6	5	83						
Administrative Assistants	1	1	1	1	1	—	1	—	4	4	100	—	—	—						
Chief Book Keeper	1	1	7	5	3	—	—	—	11	8	73	—	—	—						
Secretary-Typist	1	1	—	—	—	—	—	—	1	1	100	—	—	—						
Housing Manager	1	1	—	—	—	—	—	—	1	1	100	—	—	—						
Total	98	81	120	105	129	117	81	69	42	54	59	46	41	32	358	301	85	267	228	86

2. Of the engineer grades a 10 per cent loss due to retirements and resignations was balanced by a corresponding intake from recruitment.

3. The establishment of engineers was increased by nine permanent and two temporary officers but this modest increase indicates to a small degree only the real need for a very great increase if the works desired by the public, and indeed for which funds can be found, are to be done. The number of experienced water supply engineers in particular is totally inadequate.

4. Vacancies in the accounting grade caused great difficulties in manning the duty posts.

5. During the year the following new appointments were made :—

TABLE IV

	Permanent		Temporary		Total
	Perm.	Temp.	Perm.	Temp.	
Engineers	12	—	9	—	21
Architects	—	—	2	—	2
Works Manager and Assistant Works Managers	8	—	—	—	8
Drilling Superintendents	—	—	1	—	1
Inspector Grades and Drillers	8	—	17	—	25
Accountants	2	—	4	—	6
Storekeepers and Stock Verifier	4	—	1	—	5
Secretary-Typist	—	—	1	—	1
Total	34	—	35	—	69

Transfers from the temporary to the permanent establishment included two storekeepers and two inspectors: Two executive engineers were transferred from the permanent to the temporary establishment.

6. Left the Service :—

TABLE V

	Retirement		Invaliding		Resignation		Transfer		Death		Termination		Total	
	Perm.		Temp.		Perm.		Temp.		Perm.		Temp.			
	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.		
Engineers	4	—	3	—	5	3	—	—	—	—	—	—	5	20
Architects	—	—	—	—	—	—	1	—	—	—	—	—	—	1
Works Manager and Assistant Works Managers	4	—	—	—	—	—	—	—	1	—	—	—	1	5
Drilling Superintendents	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Inspector Grades and Drillers	2	—	1	—	1	6	2	4	1	—	—	—	11	28
Accountants	1	—	—	—	—	—	—	1	—	—	—	—	1	3
Chief Book-keeper, Storekeepers and Stock Verifier	2	—	—	—	—	—	—	—	—	—	—	—	—	2
Secretary-Typists	—	—	—	—	—	2	—	—	—	—	—	—	—	2
Totals	13	—	4	—	6	11	3	5	2	—	—	—	18	62

7. Five officers who retired attained the statutory age limit and the others retired voluntarily attaining the age of over forty-five.

8. The senior staff lost 1,129 man days through sickness, an incidence of .59 per cent which is somewhat less than usual.

9. Seventy-nine officers went on leave after completing a tour of twelve months, one hundred and one after less than eighteen months' tour and one hundred and nine completed tours of over eighteen months. Three went on medical grounds and five officers on special or emergency leave.

10. *Nigerianisation*.—One officer was transferred to the Department from the Education Department as Housing Manager, and five officers were promoted from the junior to the senior staff in the following grades :—

One Executive Engineer ; one Labour Relations Officer ; one Storekeeper and two Inspectors of Works. Eighteen Officers proceeded to United Kingdom to complete professional training.

11. *Junior Staff*.—On the 1st of April, 1953, the authorised permanent establishment was :—

TABLE VI

	Central	North	West	East	Total
Engineers, Grade I-IV	3	5	5	3	16
Engineering and Architectural Assistant (Senior and Junior)	29	69	45	47	190
Technical Assistants and Assistant Drilling Superintendent	11	31	20	18	80
Senior Assistant and Assistant Inspectors of Works	8	11	13	24	56
Artisans and Craftsmen	86	98	200	120	504
Motor Drivers and Motor Mechanics	8	20	21	36	85
Trade Apprentices	2	—	10	—	12
Road Overseers and Aerodrome Overseers	—	21	66	71	158
Miscellaneous Sub-Staff	10	19	45	35	109
Clerical Staff	127	114	111	93	445
Assistant Labour Relations Officers	1	1	2	1	5
Store Examiners	11	—	—	—	11
Principal and Senior Store Assistant, Grade I-III	39	2	8	2	51
Stores Assistant and Attendants	78	13	18	25	134
Storemen	56	—	12	20	88
Time Keepers	4	11	15	17	47
Messengers and Watchmen and Telephone Attendants and Porters	29	19	23	32	103
Baggage Foremen and Assistant Baggage Foremen	—	2	2	—	4
Totals	502	436	616	544	2,098

12. *Health and Leave Statistics* :—

Number on sicklist	289
Average duration of illness	8 days
Number left the service due to retirement resignation and other causes	40
Number of deaths	10
Number proceeded on vacation leave	765
Average incidence of sickness .. .. .	.305 per cent

13. *Clerical Staff*.—The establishment of first-class clerks was increased by two, second and third-class clerks by sixteen ; and clerical assistants by eight.

Losses were as follows :—

Retirements	6
Invalidings	2
Resignations	19
Terminations of appointment	4
Dismissals	2
Deaths	2
Total	35

14. *Labour Relations*.—The Labour Relations Staff consisted of one Labour Relations Officer and one Assistant Labour Relations Officer at the Centre and in each Region except that the Western Region employed an additional assistant.

The increase in the number of the senior officers is due to the appointment of one expatriate Labour Relations Officer in the Northern Region and to the promotion of one Assistant to the Senior Grade in the Western Region. One Assistant Labour Relations Officer proceeded to England on a course of training.

15. *Negotiating Machinery*.—The Consultative and Works Committees in Lagos and Colony Area met at intervals and did useful work. The method of approach to labour matters, whereby a district or section of the union in the provinces makes an independent decision or takes action without consultation with the Lagos Committee still continues, and the unions are unable to prevent this procedure. Under these conditions labour problems have to be tackled by the local officers themselves with the assistance of the Labour Relations Staff. This fact notwithstanding, the relations between the Department and the union representatives have continued to be cordial.

16. *Trade Testing*.—It is of note that at the final meeting (held in July) of the committee set up to discuss trade testing in Nigeria, it was agreed that trade testing confined in the meantime to twelve trades (blacksmiths, carpenters, cabinet makers, fitters, machinists, motor mechanics, motor electricians, fitters (water), turners, welders, bricklayers and painters), be carried out by the Department of Labour.

It was further agreed that arrangements for such tests would be made by the Labour Relations Officer on the recommendation of the officer in charge, and that applications from other sources should not be entertained. For other trades, however, not mentioned above, tests would continue, as in the past, to be carried out by the Department until the Department of Labour have adequate Staff to take them over. This arrangement came into operation immediately in Lagos, where it is now working satisfactorily, and will be extended to the Regions as soon as the trade testing staff of the Department of Labour is increased.

17. *Trade Disputes*.—For the year under review there were no labour disputes and tribute must be paid to the good sense of all concerned.

TABLE VII—NUMBER OF DAILY PAID STAFF EMPLOYED IN VARIOUS GRADES OF THE PUBLIC WORKS DEPARTMENT—DECEMBER 1953

	<i>Appren- tices</i>	<i>Labourers</i>	<i>Skilled Labourers</i>	<i>Craftsmen and Artisans</i>	<i>Clerical</i>	<i>Super- visors</i>	<i>Total</i>
Northern	88	6,071	1,638	2,032	257	113	10,199
Eastern	—	4,666	1,668	995	256	139	7,724
Western	—	3,855	1,448	1,500	190	72	7,065
Lagos (Western)* .. .	—	827	957	891	122	9	2,806
Lagos (Central)† .. .	—	408	462	395	362	21	1,648
Total	88	15,827	6,173	5,813	1,187	354	29,442

* "Western" includes the constructional staff under the control of the Deputy Director Colony and includes Ikoyi and Ijora Building yards and roads, and Ikeja.

† Includes Sawmills, Mechanical Workshops and Stores.

19. No workers under eighteen years of age were employed.

20. Wage rates have remained the same as for the previous year except in the Niger Province, Northern Region, where, with effect from 1st January, 1953, 'Minna Area' went up from Area 9 to Area 8 and the rest of Niger Province from Area 10 to

Area 9, involving, in the former case, an increase of *2d per diem* for General and Special Labour, Grade III and in the latter, *2d per diem* for General and Special Labour, Grade III, *3d per diem* for Special Labour, Grade II and *6d per diem* for Special Labour, Grade I.

21. A general summary of staff is given in the following table :—

TABLE VIII

	Permanent		Temporary		Total	
	Authorised	Actual	Authorised	Actual	Authorised	Actual
<i>i</i> Engineers Civil :						
(a) Directorate	4	4	—	—	4	4
(b) Headquarters	31	26	2	2	33	28
(c) Provincial or Divisional	89	73	52	42	141	115
<i>ii</i> Engineers Mechanical :						
(a) Headquarters	6	*6	—	—	6	6
(b) Provincial	11	*10	13	7	24	17
<i>iii</i> Engineers Electrical :						
(a) Headquarters	2	1	—	—	2	1
(b) Provincial	—	—	—	—	—	—
<i>iv</i> Architects	15	15	18	17	33	32
<i>v</i> Town Planners	3	3	—	—	3	3
<i>vi</i> Accountants	20	16	9	7	29	23
<i>vii</i> Inspectors of Works†	137	113	167	148	304	261
<i>viii</i> Storekeepers‡	23	22	6	5	29	27
Labour Relations Officer and Administrative Assistant	17	14	—	—	17	14
<i>ix</i> Engineering Assistants, Architectural Assistants and Technical Assistants ..	286	231	—	§	286	231
<i>x</i> Clerical Staff	445	369	—	§	445	369
<i>xi</i> Foremen	56	33	—	§	56	33
<i>xii</i> Road Overseers	158	131	—	§	158	131
<i>xiii</i> Other Permanent Staff, e.g., Artisans, Motor Drivers and others	1,153	952	—	§	1,153	952

* 10 of these are contract Officers occupying permanent posts.

† Including Chief Inspectors.

‡ Including Stock Verifiers.

§ Not separately recorded.

CHAPTER III—ARCHITECTURAL BRANCH

1. Building Costs in general remained steady during the year, and this, coupled with a much steadier supply of essential materials than at any other time since the war, resulted in keen tendering for all classes of work.

2. The numbers of contractors competent to carry out major contracts have increased and a larger volume of work is consequently going to these firms. This, however, does not lessen the amount of works carried out departmentally as the annual building programmes continue to increase considerably with the rapid expansion and development of the country. More work put out to contract has put a heavier strain on to the Architectural Branch both in the production of plans and documents and site supervision.

3. The continued shortage of reinforced concrete engineers and quantity surveyors has been partly offset by the employment of consultants in both of these spheres. Several large and well known firms have set up local offices and as these have access to their large organisations in the United Kingdom they have given useful service especially on work required urgently and at short notice.

4. The general schemes for the decoration of public buildings in the Colony area in connection with the Coronation of Her Majesty the Queen were prepared by this branch. A special temporary pavilion was designed and erected on the jetty opposite Government House.

5. Architectural work carried out may be summarised thus :

TABLE IX

<i>Description</i>	<i>Central</i>	<i>Northern</i>	<i>Western</i>	<i>Eastern</i>	<i>Total</i>
Sketches and working drawings	326	322	148	154	950
Prints	8,108	6,096	5866	1,002	21,072
Schedules of Materials	—	—	—	15	15
Estimates	73	68	15	11	167

The above work embraced a large variety of structures and included a Teaching Hospital, a Museum, a Multi-storeyed Office, a Broadcasting Station, a Telecommunications Training Centre, a Large Workshop, a Police Barracks, an Army Pay and Records Office, an International Air Terminal Building, etc. A summary is included in Chapter IV—Buildings.

Descriptions of the larger and more interesting buildings are given hereunder :—

CENTRAL

6. *Air Terminal Building, Kano.*—Working drawings, detail drawings, specifications and bills of quantities have now been completed and this important building has been brought to the tendering stage. It is anticipated that the contract will be signed during May 1954 and work should commence on the site in June.

The architectural work entailed in the preparation of this scheme has stressed the importance and necessity for early liaison with specialists (air-conditioning, pneumatic tubes, Public address system, telephones, radio, catering equipment, petrol installation, fire-fighting equipment, etc.), and for these specialists to be given the earliest opportunity to finalise their schemes. Some difficulty is still being experienced in obtaining completely finalised schemes from specialists and already several revisions have been made to the building plans to accommodate them.

The International Air Terminal Building Kano will take about two years to complete and is expected to cost over £300,000. It is designed in the contemporary style with a reinforced concrete frame, reinforced concrete floors and roofs and sandcrete block walling ; it is mainly in two-storeys with flat roofs.

7. *University College, Ibadan, Teaching Hospital.*—As stated in the last annual Report (1952-53), this work is being carried out under a 'Fixed Fee Agreement' and in order to provide a "breathing-space" for the preparation of schemes and drawings, work started on P.W.D. standard type houses and flats. Progress has been made and site work is now in hand on the main layout, hospital buildings, etc., and the percentage of completion is as follows :—

	<i>Per Cent</i>
Roads	40
Medical Students Hostel	85
Sisters Flats Block 1	83
Sisters Flats Block 2	24
Sisters Flats Block 3	10
Main Hospital Block A 1	17
Main Hospital Block A 2	13
Main Hospital Block B 1	6
Main Hospital Block B 2	1

The Consulting Architects for the Main Hospital are Messrs Watkins, Gray and Partners FF.R.I.B.A., the Public Works Department being responsible for the ancillary buildings and quarters and for site supervision of the whole scheme.

8. *Pay and Records Office, Apapa.*—This building for the Army was begun in June and the time allowed for completion was until June 1954. However, good progress was made by the contractors and the building was completed before time and was handed over to the Army for occupation on 1st April, 1954. The contract figure was £35,710 but extra site works were required as the site was changed from that originally intended for the building.

The building is two-storied and the construction is of sandcrete walling, cement rendered both sides and finished with cement paint; first floors are in reinforced concrete and the roof of corrugated asbestos. The form is that of three sides of an oblong joined on the open long side by a covered way to a sanitary block in the centre.

9. *Six storey office block in Lagos.*—This office building was completed and occupied.

10. *Museum Lagos.*—Work was begun by contract in September. The site is a good one in King George V Park and contains some very beautiful trees, which are being retained as far as practicable. Particular attention has been paid to general finishings both externally and internally and these include cork floors, terrazzo floors, wood strip and block floors, precast concrete floorings to patterns, precast concrete work to motifs, stairs, etc. An air-conditioned store block will be provided.

11. *Broadcasting House, Lagos.*—This building was completed in March and the official opening was arranged for April. The Air-conditioning plant had not arrived by the end of the year.

Good use of colour has been made throughout and a mural decoration has been provided in the main Entrance Hall and depicts general cultural progress. A piece of sculpture decorates the end gable of the main studio block. Both the mural and the sculpture are the work of Mr Ben Enwonwu.

12. *Extensions to King's College.*—This work is being undertaken by contract and the reinforced structure is complete and ready for roofing.

13. *Housing, Junior Staff (Low cost).*—A scheme is well in hand to provide further experimental low-cost housing at Oshodi in connection with the New Posts and Telegraphs Telecommunications Centre.

Senior Staff.—While some housing was executed departmentally contracts were let to the total amount of £234,540 for type housing, Flats and types T.71A, T.72 and T.82.

14. *New Schemes.*—A large programme of new schemes is projected and planning work is well in hand on the following major items:—

(a) Vehicle Reserve Depot for the War Department—this work is estimated to cost £100,000 and will provide for:—

- New Workshops,
- Stores,
- Covered and Open Vehicle Parkings,
- Battery Charging Shop,
- Offices,
- Fire Station,
- Petrol Station,
- Vehicle Ramps,
- Ancillary Buildings.

(b) *Telecommunications Centre, Oshodi near Lagos.*—Development of existing School to include :—

New Administration Block,
Radio Engineering Block,
Line Construction Block,
Laboratory,
Common Room and Library Block,
Students Hostels,
Senior Staff Quarters,
Junior Staff Quarters.

The approximate estimated total cost of the full scheme is £200,000 of which the first phase to start next year is estimated to £104,000.

(c) *Regionalisation of the Southern Cameroons.*—This scheme embraces the provision of the following programme at Buea, Southern Cameroons and will form the Centre for the New Regional Legislature :—

Catering Rest House with Chalets and Quarters for Legislators. (Temporary).
Legislature and Office Block, Senior and Junior Staff Housing, Post Office.

A phased programme is to be prepared and it is anticipated that work will commence within a few months as the work has been given high priority. A preliminary estimate of the total scheme including roads, electricity, water, etc., is £150,000.

Many difficulties are anticipated owing to the lack of suitable local materials, scarcity of local skilled and suitable unskilled labour, site inaccessibility to trade facilities, etc.

15. *General.*—This report is one of general all round progress on large contract and departmental programmes and general expansion.

Larger and up-to-date buildings are now required and marked improvements have been made both in design and finishings.

Many buildings are requiring modern air-conditioning, electrical and mechanical installations and some difficulty is at present being experienced owing to the unavoidable scarcity of experienced staff and because it is most difficult to obtain this specialist equipment on time to fit in with building programmes.

CHAPTER IV—BUILDINGS

1. *Maintenance.*—The capital value and expenditure on maintenance of Government Buildings by the Department are given in Tables X and XI.

TABLE X

Category	Value at	Value at	Value at
	31-3-52	31-3-53	31-3-54
	£	£	£
Senior Staff Quarters	4,854,254	5,811,235	6,664,722
Junior Staff Quarters	2,152,667	2,574,805	3,033,208
Public Buildings	4,832,782	6,362,465	7,176,839
Totals	11,839,703	14,748,505	16,874,769

2. TABLE XI—MAINTENANCE

	£	1951-52	1952-53	1953-54
		Expenditure on Maintenance	£	181,338	215,210	256,733
Percentage of Capital Value .. .. .	..	1.82	1.82	1.74
Value of New Buildings	£	1,913,143	2,908,802	2,126,264

The capital value of the buildings shown above is the actual cost at the time they were built. The present day value of the older buildings would be much greater and the true percentage maintenance cost would be reduced.

The distribution of building valuation throughout the Regions is shown in Table XII and similar figures for furniture are given in Table XIII.

3. TABLE XII

Category	Value at 31-3-53	Additions during year	Value at 31-3-54	Maintenance	
				Cost	Percentage of Capital Value
<i>Colony</i>					
Senior Staff Quarters	£ 2,295,460	£ 241,452	£ 2,536,912	—	—
Junior Staff Quarters	1,180,941	180,326	1,361,267	—	—
Public Buildings	2,299,709	206,885	2,506,594	—	—
Total, Colony	5,776,110	628,663	6,404,773	114,065	1.97
<i>Northern Region</i>					
Senior Staff Quarters	1,415,479	365,599	1,781,078	—	—
Junior Staff Quarters	487,570	148,073	635,643	—	—
Public Buildings	1,588,545	326,374	1,914,919	—	—
Total, Northern Region	3,491,594	840,046	4,331,640	56,033	1.61
<i>Western Region</i>					
Senior Staff Quarters	982,047	194,063	1,176,110	—	—
Junior Staff Quarters	381,131	33,800	414,931	—	—
Public Buildings	1,066,706	141,928	1,208,634	—	—
Total, Western Region	2,429,884	369,791	2,799,675	42,761	1.76
<i>Eastern Region</i>					
Senior Staff Quarters	1,118,249	52,373	1,170,622	—	—
Junior Staff Quarters	525,163	96,204	621,367	—	—
Public Buildings	1,407,505	139,187	1,546,692	—	—
Total, Eastern Region	3,050,917	287,764	3,338,681	43,874	1.43

4. TABLE XIII—FURNITURE

	Value at 31-3-53	Additions during year	Value at 31-3-54	Maintenance	
				Cost	Percentage of Capital Value
<i>Colony</i>					
Colony	£ 374,191	£ 21,457	£ 395,648	£ 18,395	4.9
Northern Region	158,983	65,682	224,665	10,359	6.5
Western Region	106,620	53,422	160,042	6,403	6.0
Eastern Region	129,720	18,584	148,304	5,141	4.0
Total	769,514	159,145	928,659	40,298	5.2

5. The following Tables XIV and XV summarise the building work.

TABLE XIV—PUBLIC WORKS EXTRAORDINARY—PRINCIPAL BUILDINGS
COMPLETED DURING THE YEAR

Province	New Buildings Completed	Estimated	Actual	
		Cost	Cost	
		£	£	
COLONY	Branch Post Office and Quarters, Mushin	5,000	4,903	
	House of Representatives	160,000	158,404	
	Trade Testing Centre	14,000	13,261	
	Two Dormitories, Southern Police College, Ikeja	6,400	5,875	
	Senior Staff Quarters (Third Instalment)	250,000	246,704	
	Ikoyi Rest House—Six Double Chalets	13,200	13,288	
	Lands and Survey Office—Extension	25,680	17,269	
	Twenty-three Senior Staff Quarters	64,600	61,314	
	Senior Staff Quarters (First Instalment)	150,000	145,000	
	Laboratory and Office, Forensic Science Unit	5,750	5,570	
	Medical Stores, Oshodi—Extension	37,000	31,941	
	Three Automatic Telephone Exchange Satelites	43,270	42,919	
	Police Station and Quarters, Ijora	49,450	49,044	
	Operating Theatre, Creek Hospital	6,560	4,127	
	Police Station and Quarters, Ikorodu	15,800	15,173	
	Office for Assistant Commissioner of Police	7,150	6,998	
	Divisional Office, Epe	11,500	11,418	
	BAUCHI	Three A 3 Quarters, Bauchi	9,300	9,613
		Junior Staff Quarters, Bauchi	10,900	10,315
	BORNU	Junior Staff Quarters, Maiduguri	5,800	5,759
Two A 3 Quarters, Maiduguri		7,600	7,338	
ILORIN	Maiduguri Post Office—Extension	6,420	6,410	
	Provincial Office, Ilorin	14,600	14,596	
	Police Barracks, Ilorin	12,800	14,572	
KABBA	Three A 3 Quarters, Lokoja	11,300	11,298	
	Medical Stores, Kaduna	45,500	45,205	
KADUNA	P.W.D. Workshops, Kaduna—Extension	31,550	31,413	
	Block of Flats, Kaduna	24,500	23,359	
	Catering Rest House—Extension	29,000	29,088	
	Senior Staff Quarters	77,280	75,721	
	Accommodation for Executive Council	11,720	10,877	
	Austerity Office Block	17,200	15,918	
	Two A 4 Quarters	6,000	6,166	
	Veterinary Clinic	5,100	4,777	
	Ten A. 3 Quarters	46,000	42,456	
	Survey Office	9,200	8,252	
	Two Blocks of Single Storey Offices	13,500	12,746	
	Department of Commerce and Industries—Office Accomodation	16,680	16,646	
	Married Quarters for Officers and other Ranks (Military)	31,250	24,615	
	KANO	Kano Airport—Night-stop Accommodation	35,450	34,125
		Kano Airport—Hotel Extension	31,300	30,576
		Senior Staff Quarters, Kano	76,660	78,336
		Junior Staff Quarters, Kano	5,250	4,958
Womens' Training Centre, Kano		5,950	4,985	
Hostel for Dispensary Attendants and Maternity Assistants		15,850	15,796	
KATSINA	Residency, Katsina	11,300	11,285	
	Provincial Office	16,460	13,828	
	Five A 3 Quarters	17,700	17,332	
PLATEAU	Museum, Jos	9,810	9,844	
	Three A 3 Quarters, Sokoto	11,328	11,237	
SOKOTO	Provincial Office—Extension	8,000	7,821	
	Extension to Clerical Training Centre, Zaria (Phase 1)	33,780	20,960	
ZARIA	Senior Staff Housing, Victoria	9,540	9,804	
	Quarters for Customs Preventive Staff, Bota	26,800	25,538	
CAMEROONS	Senior Staff Quarters, Bamenda	6,360	6,184	
	Prisons Department, Bamenda—Junior Staff Quarters	5,380	5,086	
CALABAR	Prisons Department, Bamenda—Junior Staff Quarters	8,000	9,262	
	Extension to Lunatic Asylum, Calabar	13,270	13,224	
ONITSHA	Senior Staff Housing, Onitsha	11,200	10,369	
	Marine Staff Quarters	11,300	11,293	
RIVERS	Senior Staff Quarters, Port Harcourt	21,200	18,902	
	Supreme Court and Judge's Quarters, Port Harcourt	6,258	6,093	
ENUGU	Junior Staff Quarters, Enugu Air-port	5,500	5,466	
	Senior Staff Quarters, Ijebu-Ode	13,300	12,590	
IJBEBU	Senior Staff Quarters, Akure	7,200	6,134	
	Two A 3 Quarters, Oyo	10,100	7,786	
OYO	Type "C" Post Office and Quarter, Ilesha	12,340	11,684	
	Ife Museum—Improvements	54,500	54,994	
	Extension to Secretariat, Ibadan	94,400	93,568	
	Senior Staff Quarters, Ibadan	12,000	11,135	
	Survey Office, Ibadan	85,550	77,941	
	Quarters for Ministers	26,510	27,095	
	Commerce and Industries, Ibadan—Houses and Offices	24,250	23,727	
IBADAN	Printing Office, Ibadan			

6. TABLE XV—PUBLIC WORKS EXTRAORDINARY—PRINCIPAL BUILDINGS
UNDER CONSTRUCTION

Province	Principal Buildings under Construction	Estimated Cost	Previous Expenditure	Expenditure 1953-54	
		£	£	£	
COLONY	Posts and Telegraphs Workshops, Iddo	126,000	—	58,802	
	Army Pay and Records Office	90,000	—	34,268	
	Married Quarters for Officers and other Ranks (Military)	50,000	—	21,958	
	Supreme Court, Lagos	420,000	173,175	111,302	
	Six Storey Block of Public Offices	265,000	193,022	47,218	
	Extension to King's College, Lagos	106,000	—	32,940	
	Ijora Sawmills—Extension (Second Instalment)	100,000	1,111	20,096	
	Public Works Department Stores, Ijora and Apapa—Extension (Third Instalment)	55,000	372	15,891	
	Barracks for Customs Staff, Apapa	49,340	25,004	19,599	
	Car Store, Lagos	15,600	—	5,992	
	Block of Flats for Police Clerical Staff	25,000	—	22,621	
	Two Blocks of Flats, Police Barracks, Lagos	50,000	—	27,966	
	Senior Staff Quarters (Fourth Instalment)	300,000	—	101,144	
	Museum, Lagos	80,000	—	10,936	
	Accommodation for Security Police, Ikeja	27,600	—	23,277	
	Telecommunications Training Centre, Oshodi	104,305	—	31,703	
	Police Barracks, Obalende (Final Section)	27,500	15,975	9,721	
	Police Barracks, Apapa	66,000	5,762	45,316	
	ADAMAWA	Extension to Provincial Office, Yola	10,300	—	6,161
		Police Barracks, Yola	11,000	—	7,995
	BAUCHI	New Provincial Office, Bauchi	18,500	4,894	11,054
	BORNU	Provincial Office Extension, Maiduguri	23,430	17,615	5,594
	Senior Staff Quarters, Maiduguri	16,160	—	14,058	
KABBA	New Police Barracks, Lokoja	42,200	7,978	22,479	
KADUNA	Six Houses for Regional Ministers	88,500	49,384	35,435	
	New Police Barracks	48,000	7,127	25,546	
	Block of Flats	25,800	—	17,297	
	Six A 3 Quarters	27,300	—	16,437	
	Junior Staff Quarters	49,286	—	24,932	
	Two Blocks of Flats	50,600	—	10,509	
KANO	Buildings and Quarters for Civil Aviation Radio Operation	11,930	—	7,960	
	Four A 3 Quarters, Kano	15,000	—	11,517	
PLATEAU	Special Type Post Office, Jos	26,000	—	15,342	
	Quarters for Veterinary Staff, Vom	9,000	—	6,211	
	Junior Staff Flats, Jos	64,100	—	57,466	
	Senior Staff Flats, Jos	22,000	11,261	10,979	
	Extension to Provincial Office	10,300	—	7,428	
	One Block of Senior Staff Flats, Jos	23,610	—	14,781	
	Extension of P.W.D. Workshop, Jos	26,000	13,182	10,696	
SOKOTO	Two A 3 Quarters, Sokoto	7,700	525	5,763	
ZARIA	Clerical Training Centre, Zaria (Phase 11)	62,950	—	60,093	
	Adult Literacy Campaign Headquarters	25,200	—	22,637	
OWERRI	Type "A" Post Office and Quarters, Aba	20,000	—	8,437	
ONITSHA	One T 32 Quarters, Onitsha	10,240	—	7,127	
RIVERS	Marine Staff Quarters, Port Harcourt	16,800	4,022	9,145	
ENUGU	Offices for Commerce and Industries and Labour Departments	18,000	—	15,612	
ABEOKUTA	Customs Buildings, Ijofin	11,600	—	6,144	
BENIN	Four A 3 Quarters, Benin	17,000	5,853	10,647	
DELTA	Extension to Police Barracks, Warri	55,600	37,682	5,864	
IBADAN	Police Barracks, Ibadan	164,000	45,005	17,516	
	Provincial Office, Ibadan	13,800	—	9,244	
	Senior Staff Housing, Ibadan	52,250	—	10,375	
	Extension to Secretariat (Phase 111)	60,000	—	19,140	
IJEBU	Police Barracks, Shagamu	8,000	—	5,914	

7. TABLE XVI—PRINCIPAL BUILDINGS CARRIED OUT UNDER THE DEVELOPMENT SCHEME

Section	Description	Estimated Cost	Previous Expenditure	Expenditure during year
	<i>Northern Region</i>	£	£	£
AGRICULTURE ..	Fifty-one Junior Staff Quarters, Samaru ..	23,600	—	15,599
	Agricultural School, Samaru—Extension ..	64,027	—	21,435
BROADCASTING ..	Houses for Senior Staff, Kaduna ..	11,554	—	7,051
	Two T 63 Quarters, Kano ..	6,600	—	6,186
EDUCATION ..	Men's Elementary Training Centre, Okene ..	35,000	730	27,096
MEDICAL ..	Lokoja Hospital—Extension ..	30,750	—	6,023
	Jos Hospital—Extension ..	24,000	6,386	14,715
	Kafanchan Hospital—Extension ..	22,000	8,973	9,946
	Maiduguri Hospital—Extension ..	45,000	5,828	13,950
	Rural Health Centre, Kankiya ..	12,350	4,433	7,552
	Gusau Hospital—Extension ..	31,500	2,159	11,920
	Sokoto Hospital—Extension ..	44,750	17,618	7,981
	Ilorin Hospital—Extension ..	43,000	12,298	24,271
	Five A 3 Quarters, Kaduna ..	16,500	7,180	5,962
	Kaduna Hospital—Extension ..	16,000	—	5,023
	Senior Staff Quarters, Kano ..	10,800	—	10,069
	Medical Assistants' School, Kano ..	7,000	—	6,802
	Zaria Hospital—Extension ..	16,000	—	8,570
	<i>Eastern Region</i>			
AGRICULTURE ..	Agricultural School, Umuahia ..	81,180	1,174	11,410
BROADCASTING ..	Studio and Office Buildings, Enugu ..	10,000	—	6,535
EDUCATION ..	Women's Training Centre, Enugu ..	104,412	93,657	9,333
	Girls' Secondary School, Enugu ..	85,000	27,617	45,472
	Government College, Umuahia ..	75,000	34,527	16,200
	Boys' Secondary School, Afikpo ..	93,640	81,132	10,298
	Rural Education Centre, Bambui ..	55,900	30,640	14,532
LEPROSY ..	Isoba Leper Settlement ..	56,560	42,556	13,809
MEDICAL ..	New Hospital, Arochuku ..	11,380	5,027	7,177
	<i>Western Region</i>			
AGRICULTURE ..	Two A 3 Quarters, Ibadan ..	7,000	—	6,307
	Agricultural Farm, Warri ..	15,550	2,655	8,749
BROADCASTING ..	Broadcasting House, Lagos ..	75,438	37,400	23,451
	Houses for Senior Staff, Lagos ..	65,495	41,499	17,497
EDUCATION ..	Rural Education Headquarters, Ibadan ..	11,750	—	9,137
	Government College, Ibadan ..	94,800	25,012	15,874
	Secondary School, Ughelli ..	189,162	150,558	17,363
MEDICAL ..	Mental Hospital, Abeokuta ..	163,000	45,291	40,539
	General Hospital, Oyo ..	60,600	—	28,256
	General Hospital, Akure ..	35,000	30,181	5,108

NORTHERN REGION

8. *Offices.*—New Provincial Offices were under construction at Bauchi, Ilorin and Katsina. Extensions to existing Provincial Offices were built at Maiduguri, Yola and Zaria.

Schools and Training Establishments.—The Institute of Administration at Zaria, which was formerly the Clerical Training Centre, has been entirely rebuilt on the existing site. The main buildings, including the lecture rooms and assembly hall, are built round a courtyard. Two three storey 'L' shaped hostels each accommodate seventy-five students and include common rooms, dining halls and kitchens.

Also at Zaria, the Adult Education Campaign Headquarters was under construction.

Building work proceeded on many schools and considerable progress was made on the Women's Training Centre at Kano and the Elementary Training Centre at Okene.

Hospitals.—Work on the construction of new hospitals and the extension of existing hospitals continued in nearly every province in the Region. The Rural Health Centre at Kankiya was completed.

Museum.—The museum at Jos was completed during the year. This building has attracted considerable interest.

WESTERN REGION

9. *Extension to Secretariat, Ibadan.*—Work was completed on the second extension to the Secretariat and a third extension was commenced during the year.

Offices.—Offices were completed in Ibadan for the Department of Commerce and Industries, the Survey Department and the Government Printer. A new Provincial Office was also under construction in Ibadan.

Hospitals.—Work continued on the large new mental hospital at Aro near Abeokuta. Work also proceeded on new General Hospitals at Akure and Oyo.

Schools.—Considerable extensions took place at the Government College, Ibadan and at the Secondary School, Ughelli. Work was nearly completed on the Rural Education Centre, Ibadan.

EASTERN REGION.

10. *Schools.*—Work continued on the extension and reconstruction of the Government College, Umuahia and the Boys' Secondary School at Afikpo. The Women's Training Centre at Enugu was completed and work proceeded on the Girls' Secondary School on an adjacent site.

The Rural Education Centre at Bambui and the Agricultural School at Umuahia were both under construction during the year.

Hospitals.—Work proceeded on the new hospital at Arochuku and the new hospital at Bori-Ogoni was officially opened. Work on the extension of the Leper Settlement at Isoba proceeded during the year.

CHAPTER V—ROADS AND BRIDGES

This chapter gives a statistical record of the cost and description of bridges, and miles of road constructed, improved and maintained during 1953-54. With the exception of Table XXI the information given is in respect of Trunk Roads 'A' only.

2. Expenditure on Trunk Roads 'A' can be summarised as follows:—

	£	
(a) New construction : roads and bridges	293,100	43 miles
(b) Cross River and Ikeja bridge construction	38,200	—
(c) Major reconstruction of roads and bridges	451,400	—
(d) New bituminous surfacing	373,300	196 miles
(e) Miscellaneous improvements	37,200	—
(f) Plant	180,700	—
(g) Surveys by Crown Agents	7,500	—
(h) Maintenance	591,700	—
TOTAL	£1,973,100	—

3. Further analysis of these figures shows that expenditure on construction and maintenance by the Public Works Department for the year totals £1,068,000 by direct labour and £718,000 by contract. The tendency in recent years has been to do more constructional works by contract. This policy was first introduced soon after the

Second World War when the staff was far from adequate. There were not sufficient engineers to carry out routine maintenance let alone prepared plans and specifications to carry out new works. These were the post war conditions which brought about the use of the Fixed Fee Agreements referred to in the following pages. Such agreements may not be economical but at the time they appeared to be the most practical answer to the popular and urgent demand for highway improvements. These Fixed Fee Agreements though still in use are giving way steadily to more sure and tried ways of doing work by contract. It must be recognised, however, that well conceived contracts require experienced engineers to prepare them and experienced engineers to supervise the contracts during their execution.

4. The total of 193 miles of new bituminous surfacing compares favourably with 147 miles in 1952-53 and is the highest so far achieved in a year. Of this total 116 miles were completed by direct labour. 68 miles of bituminous gravel mix carpet twelve feet wide were laid during the year by Messrs Borini and Prono, Contractors, using a Barber Greene Asphalt Mixing Plant and Junior Finisher.

5. Another notable event was the beginning of construction by Messrs Dorman Long and Company of the largest suspension bridge in Nigeria. This bridge which will span the Cross River in Eastern Nigeria is to have a three hundred and fifty foot suspended span plus three fifty feet steel truss approach spans.

6. In spite of the increasing amount being let out to contract, capital works amounting to nearly half a million were carried out directly by the Public Works Department on 'Trunk Roads 'A'. Much of this work consists of new construction in remote areas and is consequently seldom heard of. The most notable achievement was on the Yola Wukari Road where one Executive Engineer aided occasionally by an Inspector of Works completed during the year sixteen miles of new road and over one thousand feet run of permanent bridging for an expenditure of £71,500.

7. During the last ten years there has been a world wide tendency for road transport owners to operate heavier vehicles. This applies particularly to long distance haulage, for example, transport of groundnuts to railheads in the Northern Region. Also the practice of transporting petrol in bulk by large road tankers has become very popular during the year under review. For many years it will be necessary to exert some control over the weights of vehicles permitted to use the highways in Nigeria. This is because there are many bridges built before the last war which were not designed to carry loads which today are regarded as commonplace. The Public Works Department is conscious of, and endeavouring to meet, the economic interest of transport owners in this respect. Elsewhere in this report details are given of the work of a Crown Agents bridge survey team which has already surveyed all the bridges on over one thousand miles of 'Trunk 'A' Roads as a preliminary to preparing detailed designs for strengthening or reconstructing the bridges. Those who are impatient for quick results are reminded that lorries can be built far more quickly and cheaply than bridges. Furthermore if a new and heavier vehicle is designed and constructed it is not necessary to scrap or reconstruct all previous makes of lighter vehicle. Such, however, is the case in respect of highway bridges throughout most of Nigeria if they are to accommodate the heaviest types of lorry.

8. The year 1953-54 brings Nigeria towards the end of the Ten Year Development Programme (1945-55) but without pause brings the promise of a Five Year Plan due to start in 1955. Much progress has been made during the difficult post war years, but given the right incentives the Public Works Department looks forward confidently to playing its part in the further development of the highways and bridges of Nigeria.

TABLE XVII

9. New Road Construction and Major Improvements from the Highways Capital Account.

Description	Estimated Cost	Expenditure in previous years	Expenditure during 1953-54		Total Mileage	Mileage Completed in previous years	Mileage Completed during 1953-54	Type of Road and Width of Carriage Way
			£	D				
Lagos-Ikorodu	197,000	192,417	4,659	D	22	22	Nil	22 feet B.S.D.
Ikorodu-Ibadan	240,000	31,474	81,910	C	68	3	41	22 feet B.S.D.
Zaria-Kano	103,000	58,013	1,854	D	107	57	Nil	12 feet Laterite N.C.
Ijebu-Ode-Benin	870,000	205,740	86,712	C	140	30	5	12 feet Laterite N.C.
Bansara-Mamfe	198,000	189,441	10,091	D	112	112	Nil	12 feet Laterite N.C.
Calabar-Mamfe	204,000	187,241	11,221	D	104	98	Nil	12 feet Laterite N.C.
Kwongoma-Kaduna	110,000	50,672	29,966	D	72	6	6	12 feet Laterite N.C.
Gombe-Ture-Numan	156,000	23,175	41,453	D	62	4	10	12 feet Laterite N.C.
Yola-Wukari	650,000	188,575	71,522	D	234	126	16	12 feet Laterite N.C.
Jos-Bauchi	128,000	62,439	30,880	D	84	25	25	12 feet B.S.D.
Otta-Idiroko	66,200	31,641	33,862	D	39	19	12	12 feet B.S.D.
Ife-Benin	180,000	166,445	16,934	D	177	125	13	12 feet B.S.D.
Ife-Benin	—	—	29,050	C	—	—	15	12 feet by 1½ inches Gravel Premix
Benin-Asaba	151,000	68,958	6,674	D	87	13	7	12 feet B.S.D.
Benin-Asaba	—	—	74,149	C	—	14	53	12 feet by 1½ inches Gravel Premix
Oyo-Ilorin	76,000	29,778	45,009	D	67	27	32	12 feet B.S.D.
Enugu-Abakaliki	60,000	33,262	14,645	D	43	28	15	12 feet B.S.D.
Katsina-Yashe	71,000	48,229	5,780	D	52	44	8	12 feet B.S.D.
Gusau-Sokoto	285,000	65,823	14,181	D	136	36	—	12 feet B.S.D.
Gusau-Sokoto	—	—	95,951	C	—	4	16	12 feet B.S.D.
Lagos-Abeokuta	30,000	—	16,700	D	64	21	15	Verge widening
Lagos-Abeokuta	—	—	—	—	—	—	12	Widening B.S.D. to 20 feet
Jos-Bukuru	20,000	—	18,426	D	3½	—	3½	20 feet B.S.D. N.C.
	—	—	741,629		—	—	—	

Abbreviations :—B.S.D. = Bituminous Surface Dressing, N.C. = New Construction, D = Direct Labour, C = Contract.

10. *Lagos-Ikorodu Road*.—This new road was opened by the Minister of Works on 2nd May, 1953.

11. *Ikorodu-Ibadan*.—The existing road is being widened and re-graded to Class I standard. Bridges are being reconstructed to carry twelve units B.S. 'A' loading and widened to carry two lanes of traffic on carriageways, twenty-two feet wide.

12. *Zaria-Kano*.—Owing to shortage of staff it was not possible to make much progress on this project. The fifty-seven miles constructed in previous years completes the section in Zaria Province. At the end of the year designs were being prepared for the Kogin Kano and Challowa bridges, 620 feet and 320 feet long respectively.

13. *Ijebu-Ode-Benin*.—Roadworks were carried out involving over a quarter of a million cubic yards of cut and fill through a very hilly terrain between the Shasha and Oni river. These nine miles of road are now motorable in the dry season. The Shasha bridge, 780 feet long, was completed and by the end of the year the Oni bridge 400 feet long was 75 per cent complete. In addition the Fojodo bridge 80 feet long was started and completed during the year.

14. *Bansara-Mamfe*.—Roadworks were completed in previous years. Erection of steelwork on the Afi and Aiya river bridges in progress and nearing completion.

15. *Calabar-Mamfe*.—This road through mountainous country is now nearing completion. Work was concentrated mainly on the completion of five hundred and thirty lineal feet of permanent bridging.

16. *Kwongoma-Kaduna*.—When completed this important link will shorten the distance between Lagos and Kaduna by about one hundred and twenty miles. Good progress on road and bridgeworks was maintained. Six hundred and fifty lineal feet of bridging and thirty-one box culverts were either under construction or completed during the year.

17. *Gombe-Ture-Numan*.—This is another important link in the Trunk Road 'A' system which, when complete, will shorten the all season distance by road from Jos to Yola by over two hundred miles. Work was concentrated mainly on road and culvert construction. The design for an eighty foot long bridge over the river Garabi was completed.

18. *Yola-Wukari*.—This project under the supervision of one engineer maintained satisfactory progress. It is note-worthy that no less than fifteen bridges comprising a total length of nearly seventeen hundred feet were completed or under construction during the year. The design was started for a bridge one thousand feet long to cross the Taraba River.

19. *Jos-Bauchi*.—This includes one major realignment and several minor improvements in addition to the bituminous surfacing.

20. *Otta-Idiroko*.—This includes reconstruction of Ajilete bridge with seven spans of thirty feet each.

21. *Ife-Benin-Asaba*.—Local gravel was used to provide the 1¼ inch, consolidated thickness of plant-mixed bituminous carpet. A total length of sixty-eight miles was laid on a sand clay base by one Barber Greene Junior Finisher during the year.

22. *Enugu-Abakaliki*.—Completed. Materials purchased 1952-53.

23. *Katsina-Yashi*.—Completed.

24. *Gusau-Sokoto*.—Thirty-six miles were completed by P.W.D. in previous years. The balance is being undertaken by the Colonial Development Corporation. Expenditure includes advances to the Contractor for plant and materials on site.

25. *Jos-Bukuru*.—This included the provision of twenty-two feet wide bituminous surface on a thirty-two feet wide laterite formation on a new alignment, with the construction of two bridges with carriageways twenty-two feet wide and one hundred and twenty feet and thirty feet long respectively. This eliminates the use of a dangerous road-rail bridge and a level crossing.

26. *New works provided for from Public Works Extraordinary funds.*

TABLE XVIII

Work	Estimated Cost	Expenditure in previous years	Expenditure during 1953-54	Remarks
	£	£	£	
Overbridge, Ikeja	30,000	—	4,001 C	Road over rail bridge comprising 2 No. 30 feet prestressed R.C. Spans.
Ikeja Bye Pass	7,000	—	—	Not started.
Road Construction—Ebute Metta-Apapa Area ..	200,000	—	535 D	Preliminary Investigations.
Yelwa-Fokku-Jega Road ..	33,000	4,800	20,123 D	Reconstruction of bridges and culverts including Dan-Zaki bridge.
Trunk Roads 'A' Constructional Equipment	250,000	—	180,685	Purchase of Plant.
Trunk Roads 'A' Survey of Bridges	15,000	—	7,465	Work being undertaken by Crown Agents survey team.
Cross River Bridge	350,000	685	34,298 C	Construction of one suspended span 350 feet and three steel approach spans of 50 feet.
Rehabilitation of existing Trunk Road 'A' (first instalment)	100,000	—	61,770 D	Reconstruction of bridges and culverts, resurfacing etc. See note 1 below.
Kano-Maiduguri-Fort Lamy Road	1,602,000	65,785	20,549 D	See note 2 below.

Note 1.—Includes ten miles new Bituminous Surfacing and two miles new construction on Zaria-Funtua and Kaduna-Zaria Roads respectively.

Note 2.—(a) The work includes improvements to the existing road comprising a laterite base 12 feet wide on a formation 22 feet wide and a 12 feet wide bituminous surface from Kari to Maiduguri.

(b) During the year four 20 feet span bridges were reconstructed in permanent materials, sixty new culverts were laid and improvements carried out to embankments and surface. A contract was let but not started to construct a twelve feet wide bituminous dry sand carpet from Kari to Maiduguri over a distance of 148 miles.

27. *New works provided for from the Cameroons Road Fund*.—The Cameroons are under United Nations Trusteeship and major improvements to roads and bridges are

being financed from profits derived from the export of bananas, timber, etc. All the work described below is being done under the terms of a Fixed Fee Contract with Messrs Costain (West Africa).

28. *Victoria-Bamenda : Southern Cameroons 256 miles.*—Estimated Cost £977,800. Expenditure in previous years £339,690. Expenditure during 1953-54 £312,071.

This is a major reconstruction project through mountainous country involving the following :—

(i) Widening the existing road and bituminous surface to 20 feet between Victoria and Tiko a distance of $22\frac{1}{2}$ miles.

(ii) Provision of a two coat bituminous dressing 12 feet wide between Buea and Kumba a distance of 37 miles.

(iii) The widening and reconstruction of the road to take two way traffic between Kumba-Mamfe and Bamenda including the reconstruction of all bridges and culverts in permanent materials. Distance 203 miles.

During 1953-54 the following work was completed.

29. *Victoria-Tiko 22 miles.*—Seven miles of widening and eighty-eight feet run of bridges and culverts have been completed and two hundred and sixteen feet are under construction.

30. *Buea-Kumba 44 miles.*—Thirty-seven miles of bituminous surfacing and eight hundred and fifteen feet run of bridging completed.

31. *Kumba-Mamfe 106 Miles.*—Twenty miles of bush clearing, 20 per cent of earthworks, thirty-nine bridges totalling 3,225 lineal feet completed and twenty-one bridges totalling seven hundred and ninety-two lineal feet under construction.

32. *Mamfe-Bamenda 84 miles.*—Preliminaries to reconstruct thirteen bridges totalling four hundred and eighty lineal feet.

33. *Katsina-Ala-Takum-Bissaula : Northern Cameroons 95 miles.*—Estimated Cost £194,200. Expenditure in previous years £44,166. Expenditure during 1953-54 £113,770. During the year seven and a half miles of new road and about seven hundred lineal feet of bridges and culverts were completed.

Note.—This is not a Trunk Road 'A' project but is being administered from Lagos on behalf of the Northern Region.

34. Major bridges completed and under construction.

TABLE XIX

Province	Road	Bridge		Total Length feet	Percentage Completion on			
					31-3-53	31-3-54		
Adamawa	Yola-Wukari	Lamurde	107/1	200	80	100		
		Sibri	117/4	90	60	100		
		Fan Manga	130/1	240	60	100		
		Mayo Belwa	-	413	70	100		
		Woghe	133/1	60	Nil	100		
		Darkum	139/5	60	Nil	100		
		Kojeli	145/2	60	Nil	50		
		Suwa	152/1	60	Nil	50		
		Kam	163/1	240	Nil	40		
		Wulham	-	90	Nil	40		
		Taraba	188	1,050	Nil	Design		
		Zaria	Kaduna-Kwongoma	Tube	-	280	70	100
				Baban	-	90	10	80
	Mile 45	-		70	Nil	30		
	Mile 55	-		120	Nil	50		
Plateau	Jos-Bukuru	N'Gell	-	120	40	100		
Sokoto	Yelwa-Jega	Dan Zaki	-	344	20	50		
Ijebu Ode	Ijebu Ode-Benin	Shasha	-	780	90	100		
		Oni	-	400	40	80		
		Fojodo	-	80	Nil	100		
Abeokuta	Otta-Idiroko	Ajilete	-	210	5	60		
Colony	Lagos-Abeokuta	Ikeja Overbridge	-	60	Nil	40		
Calabar	Calabar-Mamfe	Akigham	-	170	80	100		
		Awa	-	160	80	100		
		Mile 53	-	80	Nil	100		
		Mile 58	-	80	Nil	100		
Ogoja	Bansara-Mamfe	Afi	-	180	50	80		
		Aiya	-	230	50	80		
		Cross River	-	500	Nil	5		
Cameroons	Victoria-Mamfe	Njoke	-	170	70	100		

TABLE XX—MINOR BRIDGES

Province	Road	Bridge completed during 1953-54	Length feet
Adamawa	Yola-Wukari	3 No. 20 feet ; 3 No. 30 feet	150
Zaria	Kaduna-Kwongoma	1 No. 20 feet ; 1 No. 30 feet ; 1 No. 40 feet	90
Bornu	Kari-Maiduguri	4 No. 20 feet	80
Bauchi	Gombe-Numan	1 No. 30 feet	30
Plateau	Jos-Bukuru	1 No. 30 feet	30
Plateau	Jos-Wamba	3 No. 20 feet ; 2 No. 15 feet	90
Plateau	Wamba-Akwanga	4 No. 30 feet ; 1 No. 20 feet ; 1 No. 12 feet	152
Plateau	Akwanga-Lafia	4 No. 20 feet	80
Bamenda	Bamenda-Banso	1 No. 15 feet	15
Calabar	Calabar-Mamfe	1 No. 40 feet	40
South Cameroons	Victoria-Mamfe-Bamenda	Various	3,950
North Cameroons	Katsina-Ala-Takum-Bissaula	Various	700

TABLE XXI—MAINTENANCE

	Colony			North			West			East			Total		
	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £
<i>Government Roads</i>															
Bituminous ..	74	28,610	386	446	50,063	112	777	146,606	188	448	63,319	141	1,745	288,598	164
Earth or Gravel :															
All Season ..	44	9,190	210	3,096	247,251	80	928	89,661	97	1,255	142,770	113	5,323	488,872	92
Dry Season ..	—	—	—	91	2,864	31	—	—	—	—	—	—	91	2,864	31
<i>N.A. Roads</i>															
Bituminous ..	—	—	—	61	8,659	142	90	9,119	101	11	1,352	123	162	19,130	118
Earth or Gravel :															
All Season ..	52	4,350	83	5,747	214,082	37	5,524	256,389	46	5,693	174,463	33	17,016	649,284	38
Dry Season ..	—	—	—	6,847	85,139	12	140	10,475	75	286	13,191	46	7,273	108,805	15
<i>Township Roads</i>															
Bituminous ..	4	1,075	269	48	7,202	150	25	4,992	200	38	5,737	151	115	19,006	165
Earth or Gravel ..	8	1,152	144	119	11,227	94	39	4,076	105	93	7,536	81	259	23,991	93
Total Miles	182			16,455			7,523			7,824			31,984		
Total Cost £		44,377	244		626,487	38		521,318	69		408,368	51		1,600,550	50

The above table shows an increase of 3,180 miles of road maintained since 1952-53. 2,683 miles is accounted for in dry season roads most of which are little more than tracks used for groundnut evacuation in the Northern Region. Separate details in respect of Trunk Roads 'A' are shown in Table XXII. They are also included in Table XXI.

TABLE XXII—TRUNK ROADS 'A' ONLY

	Colony			North			West			East (Including South Cameroons)			Total		
	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £	Miles	Cost £	Cost/ Mile £
Bituminous ..	45	29,160	648	396	41,976	106	609	102,312	168	391	62,560	160	1,441	236,008	164
Earth Gravel :															
All Season ..	—	—	—	2,882	258,207	90	129	13,322	103	700	79,318	113	3,711	350,847	95
Dry Season ..	—	—	—	403	4,836	12	—	—	—	—	—	—	403	4,836	12
Total Miles	45			3,681			738			1,091			5,555		
Total Cost £		29,160	648		305,019	83		115,634	157		141,878	130		591,691	107

38. TABLE XXIII—AVERAGE COST PER MILE OF ROADS MAINTAINED BY THE PUBLIC WORKS DEPARTMENT

Year	Average Maintenance Cost per mile	
	Bituminous	Gravel or Earth
1950-51	£ 120	£ 61
1951-52	127	70
1952-53	156	77
1953-54	164	92

39. *Traffic Census.*—The following table is in respect of the Trunk Road 'A' system only. A traffic flow map is included at Appendix VI.

TABLE XXIV

Road	Census Point		Carriageway Type and Width at Census Point	Number of Vehicles per Diem			
	Miles	From		1950-51	1951-52	1952-53	1953-54
Lagos-Ikorodu ..	9	Lagos	B.S. 22'	146	129	294	895
Ibadan-Ijebu Ode ..	3	Ibadan	B.S. 12'	336	397	535	648
Ilorin-Jebba ..	67½	Ilorin	Jebba Bridge	29	24	26	47
Tegina-Kusheriki ..	48	Kontagora	LAT. 12'	31	86	43	61
Kaduna-Zaria ..	3½	Kaduna	B.S. 12'	305	222	362	649
Kano-Daura ..	3	Kano	B.S. 12'	634	437	389	400
Kano-Daura ..	81	Kano	LAT. 12'	98	52	60	94
Lagos-Abeokuta ..	19¼	Lagos	B.S. 20'	448	587	703	925
Lagos-Abeokuta ..	42	Lagos	B.S. 20'	661	785	739	631
Shagamu-Ijebu Ode ..	50¼	Lagos	B.S. 12'	149	148	147	281
Benin-Asaba ..	84	Benin	B.S. 12'	206	220	220	325
Onitsha-Owerri ..	15	Onitsha	B.S. 12'	240	902	574	921
Calabar-Mamfe ..	8	Calabar	LAT. 12'	—	34	26	83
Port Harcourt-Aba ..	40	Port Harcourt	B.S. 12'	164	231	286	234
Okigwi-Awgu ..	67½	Oji River	LAT. 12'	—	—	127	318
Aliade-Makurdi ..	27	Makurdi	LAT. 12'	15	18	15	22
Lafia-Akwanga ..	62	Makurdi	LAT. 12'	13	27	20	30
Jos-Bukuru ..	7½	Jos	B.S. 22'	525	716	610	635
Jos-Bauchi ..	7	Jos	B.S. 12'	270	385	211	151
Bauchi-Kari ..	83	Jos	LAT. 12'	82	87	99	53
Ibadan-Ife ..	4	Ibadan	B.S. 18'	525	570	773	860
Akure-Benin City ..	52¾	Akure	B.S. 12'	82	96	122	205
Abakaliki-Mamfe ..	4½	Abakaliki	LAT. 12'	55	43	30	36
Mamfe-Bamenda ..	80	Mamfe	LAT. 12'	17	15	20	20
Victoria-Kumba ..	32	Victoria	B.S. 12'	37	68	122	195
Kumba-Mamfe ..	66	Victoria	LAT. 12'	65	108	106	138
Yola-Toungo ..	12	Mayo Belwa	LAT. 12'	17	14	9	22
Yola-Bama ..	10	Little Gombi	LAT. 12'	43	—	39	34
Yashikera-Ilorin ..	31½	Ilorin	LAT. 12'	—	22	23	27
Ilorin-Kabba ..	26¾	Ilorin	LAT. 12'	69	41	68	58
Kabba-Oturkpo ..	1	Ayongba	LAT. 12'	—	28	67	47
Jega-Sokoto ..	5	Sokoto	LAT. 12'	22	38	86	60
Kaduna-Jos ..	80	Rigachikon	LAT. 12'	25	30	45	67
Bauchi-Gombe ..	96½	Bauchi	LAT. 12'	28	19	13	45
Gusau-Sokoto ..	173	Zaria	B.S. 12'	55	50	99	77
Zaria-Gusau ..	42	Zaria	LAT. 12'	214	127	74	281
Kano-Kari ..	66	Kano	LAT. 12'	—	—	33	66
Kari-Damaturu ..	82½	Maiduguri	LAT. 12'	185	93	—	48
Damaturu-Maiduguri	3	Maiduguri	B.S. 12'	96	73	100	68

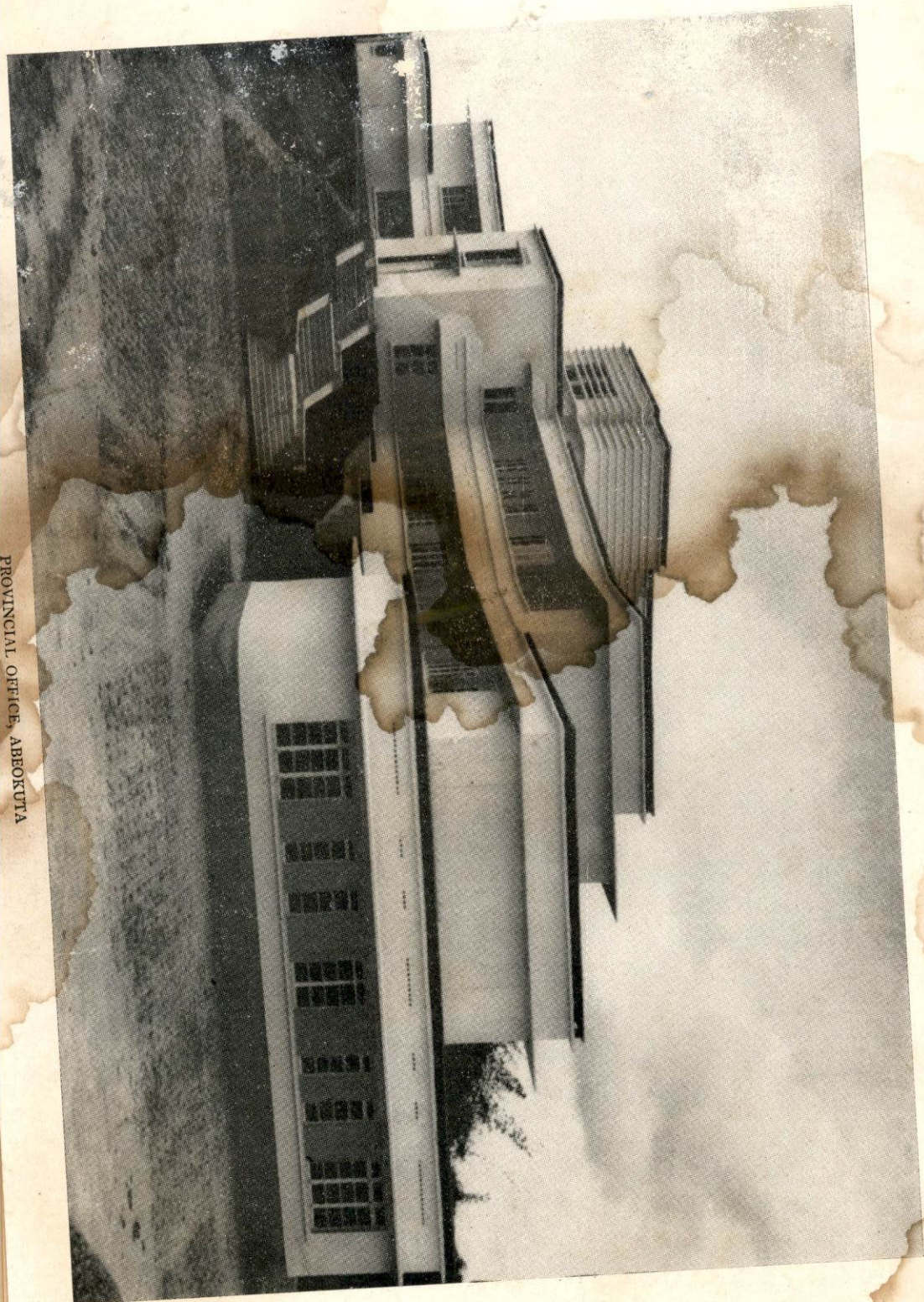


BROADCASTING HOUSE, LAGOS

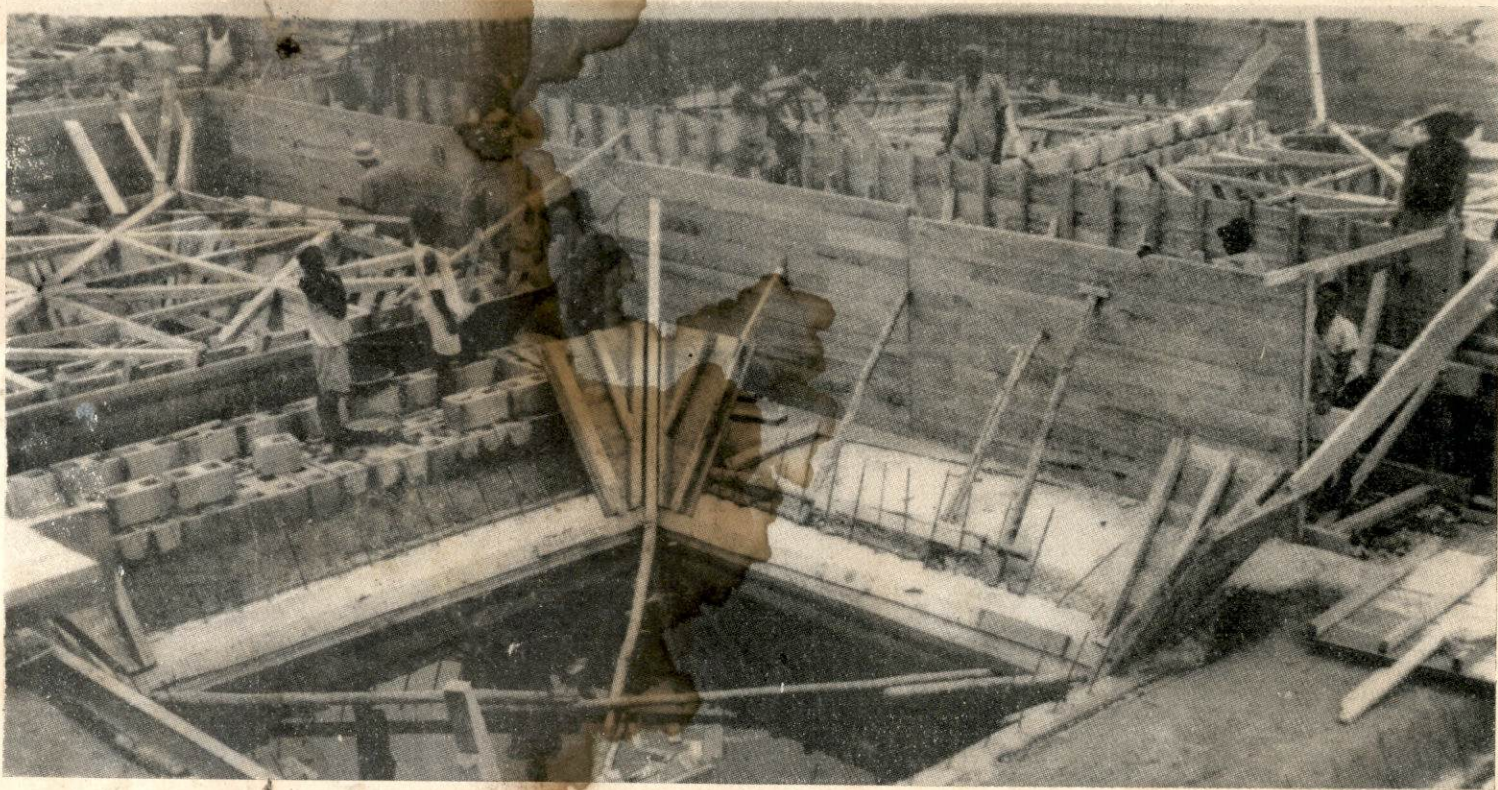


SECRETARIAT, IBADAN

THIS PHOTOGRAPH GIVES A GENERAL VIEW OF THE SECRETARIAT BUILDINGS. THERE ARE THREE SIMILAR BLOCKS, THAT ON THE LEFT BUILT IN PREWAR DAYS, THAT IN THE CENTRE IN 1951-52 AND THAT ON THE RIGHT IN 1953-54.



PROVINCIAL OFFICE, ABEOKUTA



OSHOGBO-EDE WATER SUPPLY—SEDIMENTATION TANKS UNDER CONSTRUCTION



YOLA-WUKARI ROAD—SIX 40 FEET STANDARD SPANS CROSSING RIVER FAN MANGA 130 MILES FROM YOLA



IJEBU-ODE-BENIN ROAD—SHASHA BRIDGE 780 FEET LONG INCLUDING FLOOD SPANS CONSTRUCTED TWENTY-NINE MILES EAST OF IJEBU-ODE

THIS PHOTOGRAPH GIVES A GENERAL VIEW OF THE SECRETARIAT
PREWAR DAYS, THAT IN THE CENTRE IN 1951-52 AND THAT ON THE RIGHT

40. The following statistics are included for Nigeria and the Cameroons :—

Population (approximately) ..	32,000,000
Area	373,000 Square miles
Population density	86 persons per square mile
All season road density	0.066 miles per square mile

41. The number of vehicles licensed during the first quarter in the past five years is as follows :—

TABLE XXV

Year	Commercial Vehicles	Private Vehicles	Total	Increase over previous year
1950	7,300	6,900	14,200	—
1951	7,700	8,700	16,400	15 per cent
1952	8,800	10,400	19,200	17 per cent
1953	10,600	12,300	22,900	14 per cent
1954	12,150	13,950	26,100	14 per cent

42. The quantity of motor spirit consumed during the last six years shows a spectacular increase. In 1938 the total consumption was 5,773,000 gallons.

TABLE XXVI

Year	Gallons Consumed	Percentage Increase over previous year
1948	14,005,000	—
1949	17,581,000	25 per cent
1950	21,002,000	19 per cent
1951	23,696,000	13 per cent
1952	26,325,000	11 per cent
1953	32,155,000	22 per cent

43. Surveys and investigations were carried out as follows during the year :—

(1) *Ijebu Ode-Benin Road 155 miles.*—Survey work has continued towards Benin by Messrs Costain (W.A.) Ltd., who are also constructing the new road under a fixed fee contract.

(2) *Takum-Bissaula 80 miles.*—Messrs Costain (W.A.) Ltd., have completed the survey for this new road and will later be constructing it.

(3) *Yola-Wukari 234 miles.*—A further 60 miles of new location were completed by P.W.D. staff. The survey continues and is nearing completion.

(4) *Yola-Bamenda Road 450 miles.*—A preliminary survey was completed by a P.W.D. Engineer through mountainous and little explored country. A satisfactory line for the new road was established through country less difficult than was at first expected.

(5) *Bridge Survey.*—Work was begun by a Crown Agents survey team who arrived in Nigeria in November 1953. The team has examined and surveyed over 200 bridges of ten foot span and over, totalling about 9,000 lineal feet. Where necessary the bridges are to be strengthened or reconstructed to carry twelve units B.S. 'A' Loading and where traffic is in excess of three hundred vehicles per day they are to be widened to carry a twenty-two feet wide carriageway. In urban areas four feet wide footpaths are to be added to double track bridges. There are five 'circuits' to be surveyed to cover all bridges on the "A" Road 'A' System. Drawings and

contract documents for the first section are now being prepared by the Crown Agents with a view to letting a contract in 1955. Survey work on Circuits Nos. 2 and 3 will be carried out during 1955 on the return to Nigeria of the survey team.

(6) *Kari-Maiduguri 200 miles.*—Messrs Costain (W.A) Ltd., carried out a survey of 148 miles of this road on which a bituminous surface is to be laid.

(7) *Trunk Road 'A' Surveys for Bituminous Surfacing.*—Preparations were in hand to let a contract to survey 894 miles of road on which it is proposed to lay a bituminous surface under the 1955-60 Economic Programme.

(8) *Lagos Trunk Roads 'A' Proposed New Construction and Improvements.*—The sum of £1.9 million has been included in the 1955-60 Economic Programme for Trunks Roads 'A' in Lagos. The design of two road-over-rail bridges and one causeway is being undertaken by Consulting Engineers. Detailed surveys for road works are being carried out by P.W.D. staff.

CHAPTER VI—AERODROMES

Twenty-seven aerodromes have been maintained during the year out of which eighteen have been in regular use. Details are given in Table XXVII.

2. At Kano Airport the new runway, three thousand yards long, was brought into regular use by long distance air-liners, including Comets and Constellations. Work on the construction of a taxiway to serve this runway continued during the year. The design of the new Airport Terminal Building was completed and tenders were invited towards the end of the financial year.

3. Miscellaneous improvements were carried out at Lagos Airport during the year to provide for the expansion in the air services. Work proceeded on the extension to the apron.

4. The decision was made during the year to convert Calabar Airport to enable it to handle international traffic, mainly with nearby French and Spanish territories. Plans were accordingly prepared for the provision of additional Health and Customs facilities.

5. Detailed plans were completed and preliminary work commenced on the extension and reconstruction of No. 1 Runway, Port Harcourt.

TABLE XXVII

Aerodrome	Lengths of Runways (Yards)			Cost of Maintenance		Number of Aircraft Movements during year	Types of Aircraft	Remarks
	No. 1	No. 2	No. 3	Cost per sq. yd. of flight strip	Total Cost for Year			
Agbabu ..	400	—	—	d 1.1	£ 95	—	—	Emergency landing ground
Bauchi ..	2,000	1,300	—	1.65	1,274	20	Local	Used by missionary planes
Benin ..	1,350	1,350	—	7.5	4,380	582	D.W.	No. 1 Runway has a bituminous surface
Bida ..	1,200	—	—	3.2	732	—	—	Emergency landing ground
Calabar ..	1,000	800	—	2.0	1,974	458	D.W.	No. 1 Runway has a bituminous surface
Enugu ..	—	1,350	1,350	4.6	2,465	568	D.W.	No. 1 Runway no longer in use
Gusau ..	1,500	—	—	1.56	487	156	D.	
Ibadan ..	1,400	1,000	—	2.75	2,639	398	D.W.	
Ilorin ..	2,000	1,100	—	1.51	1,402	111	D.	
Jos ..	1,700	1,300	—	2.16	1,349	2,717	D.W.	No. 1 Runway due for reconstruction in 1954-55
Kaduna ..	2,400	1,100	—	1.51	2,964	978	D.W.	
Kano ..	2,200	1,800	3,000	4.2	6,545	6,900	I.A.D.W.	Nos. 1 and 3 Runways have a bituminous surface. No. 2 Runway used as taxiway
Katsina ..	1,300	1,100	—	1.1	575	24	Local	Used by missionary planes
Lagos ..	1,800	2,200	—	12.0	9,605	4,356	I.A.D.W.	Both Runways have a bituminous surface
Lokoja ..	1,000	800	—	0.7	536	—	—	Emergency landing ground
Maiduguri ..	2,000	1,600	—	4.6	9,566	186	I.D.W.	Both Runways have a bituminous surface
Makurdi ..	1,869	900	—	2.4	1,583	308	D.W.	
Mamfe ..	1,500	800	—	2.5	1,377	2	W.	Emergency landing ground
Minna ..	1,000	1,000	—	1.5	589	176	D.W.	
Nguru ..	1,350	—	—	1.28	310	—	—	Emergency landing ground
Oshogbo ..	1,580	1,000	—	0.7	1,325	—	—	Improvements to drainage of No. 1 Runway
Port Harcourt	2,000	1,600	—	1.51	4,454	872	D.W.	No. 1 Runway due for reconstruction in 1954-55
Potiskum ..	1,500	800	—	2.3	1,042	—	—	Emergency landing ground
Sokoto ..	1,300	1,100	—	0.91	645	198	D.	No. 1 Runway has a bituminous surface
Tiko ..	1,500	—	—	7.4	2,321	217	D.W.	Runway has a bituminous surface
Yelwa ..	1,000	800	—	1.2	549	4	—	Emergency landing ground
Yola ..	2,000	1,600	1,100	0.29	1,622	73	D.W.	
Zaria ..	1,800	1,400	—	0.6	1,366	325	D.W.	

NOTES:— 1. All runways are grass unless stated otherwise.
 2. Types of Air Craft:—
 D = Dove W = Wayfarer. A = Argonaut. I = Various international airliners.

CHAPTER VII—HEADQUARTERS LABORATORY

Staff.—The staff position has proved difficult, men joining and leaving within a short period before the full benefit of their training could be felt. It is now hoped that the position may be stabilised and a nucleus of trained personnel built up.

At the end of the year the staff position was as follows:—

Executive Engineer (Temporary)	1
Engineer	1
Engineering Assistant, Grade III	3
Technical Assistant, Grade II	1
Technical Assistant (Daily Paid)	1
Labourer	1
Messenger	1
	—
TOTAL	9
	—

2. *Materials Testing*—(a) *Cement.*—A series of experiments has been started to study the deterioration of cement properties with age when the cement is stored in different types of container, e.g., ordinary bag, drum. The properties being studied are those of initial and final setting times, fine-ness, soundness and mortar crushing strength.

In addition to this work a number of other samples have been tested to check compliance with B.S. 12. The total number of samples dealt with during the year was 24.

(b) *Concrete Aggregates.*—Eleven samples of coarse or fine aggregate have been received for testing to determine their general suitability for concrete making.

The tests carried out have been those for grading, organic impurities, silt and clay content and aggregate crushing value.

(c) *Concrete Cubes.*—During the year six hundred and eighteen six inch concrete cubes have been tested to destruction. Of these thirty-five have been submitted by P.W.D. directly, the remainder being from other Government departments and various contractors.

(d) *Sandcrete Building Blocks.*—A total of fifty-one blocks have been crushed or tested for absorption.

(e) *Soils.*—The majority of the soils analysed have been submitted by Provincial Engineers for a determination of their suitability for road construction. The remainder have come from various site investigations in Lagos.

A total of two hundred and seventy-one soils have been treated, the tests comprising some or all of the following:—

Grading, liquid and plastic limits, B.S. compaction test, California bearing ratio, shear box, and unconfined compression.

3. *Foundation Investigations.*—Four sites have been examined for their suitability for building purposes. The work has involved post-hole auger borings, borings with two inch and four inch Isler equipment, and the procuring of disturbed and undisturbed samples for laboratory testing. In addition sixteen bearing tests have been conducted.

4. *Mobile Laboratories.*—The design of two mobile laboratories is in progress and soil testing equipment has arrived for them. These mobile laboratories should be of great value in extending the work of the main laboratory to field control and research projects.

CHAPTER VIII—WATERWORKS

With the ever increasing consciousness of the importance of good water supplies, funds are being made available more readily for new projects, but staff still remains a difficulty. To overcome this to some degree, consultants have been called in to tackle the larger schemes in the Western Region.

Under the new Constitution, each region will be responsible for the preparation of its own Water Supply projects and this will be the last report of the Central Organisation, except on Lagos and Southern Cameroons.

2. The position of projects under investigation or construction during the year was as follows :—

3. *Aba*.—Indents have been placed for materials to provide an improved supply up to 1.8 mill. galls/day.

4. *Abakaliki*.—Water was being delivered during the year to the Government Station but the necessity for some improvements to the intake has become apparent.

5. *Auchi-Jattu*.—Design completed and indents for materials have been placed.

6. *Bauchi*.—Work continues and the construction of the service reservoir is in hand.

7. *Enugu*.—A new service reservoir of half a million gallons was brought into service and thus completed the first phase of the improvements necessary to meet the ever increasing demands.

8. *Effon-Alaiye*.—This pumping scheme to supply the ten thousand people was virtually completed.

9. *Gombe*.—No. 3 borehole completed and gave a yield test of four thousand gallons per hour. Work on the service reservoir and distribution mains continues.

10. *Gasau*.—Main laying continues and some fifteen thousand feet have been laid.

11. *Ikare*.—The design for this scheme comprising an impounding dam, pumping and treatment plant and distribution has now been completed and materials will be ordered.

12. *Ilesha*.—The scheme has been completed and a supply is being given but trouble is still being encountered with burst pipes.

13. *Ilorin*.—This scheme, constructed by contractors, has been completed and a partial supply is now in operation.

14. *Iwo*.—Construction has gone ahead well. Work on the impounding dam is in hand and mains have been laid.

15. *Jos*.—Eleven thousand feet of the new eight inch diameter delivery main from the reservoir to the town have been laid.

16. *Lagos*.—Difficulty was experienced by the Contractors in making the new rapid gravity filters watertight, and this has greatly delayed the opening. It is hoped to have these in use early in 1955.

17. *Lokoja*.—Part of the intake on the River Niger and the service reservoir have been completed while some six thousand five hundred feet of distribution mains have been laid.

18. *Maiduguri*.—Erection of the service reservoir is in hand while drilling continues on the shallow bore holes from which the town will be supplied.

19. *Onitsha*.—Owing to financial difficulties work on the new supply has been held up.

20. *Oshogbo-Ede*.—Construction work has now been virtually completed. Electrical wiring has to be completed but it is hoped that electricity from the new nearby power station will be available early in 1955 to enable the scheme to be operated. Difficulties with burst pipes are likely for some time.

21. *Sokoto*.—Erection of the high level service reservoirs is in hand but a supply has been available through selling stations for the whole year.

22. *Rural Water Supplies*.—Table No. XXIX sets out the progress made during the year which so far as the Northern Region is concerned shows a steady improvement over previous years. The other Regions have been seriously handicapped through lack of funds. In the Eastern Region it is hoped that the coming years will show a considerable improvement.

23. *Drilling*.—Table XXIX also shows the figures for the year. Improvement over the previous years is marked. Deep drilling at Maiduguri has been at a standstill owing to the failure of the contractor to implement arrangements made for the continuation of the work. In the Western Region successful holes were drilled at Asaba, Agbor and Fugar.

24. *Maintenance*.—No serious difficulties were experienced during the year in maintaining full supplies. Improvements were carried out at Ibadan where the raising of the spillway assures an adequate supply for many years. At Kaduna the pumping and filtration plant were duplicated, but the distribution system requires attention. A scheme for the improvement to Kano is in hand while consideration is being given for improvements at Zaria, Port Harcourt, Benin, Ife, Ijebu-Ode, Ilaro, Iseyin, Ogbomosho and Calabar. Tables Nos. XXX and XXXI give the usual information of the operation costs of all supplies.

25. *Analysis*.—The efficiency of the operation of most of the supplies is reflected in the extract from the Government Chemist report now given. In publishing this extract, the continued good offices of the Government Chemist and his staff are acknowledged and appreciated.

Extract from the Government Chemist's Annual Report.

Water Analysis.—Water samples submitted for bacteriological analyses numbered 5,872 as compared with 5,760 for the previous year. Full chemical analyses were carried out on 316 samples as compared with 125 during the previous period. In addition 7,014 samples were taken for routine control tests on the Ibadan, Kaduna, and Port Harcourt Waterworks.

Bacteriological.—Lagos, Ibadan, Kaduna and Port Harcourt supplies were tested daily throughout the year and have been very satisfactory.

The regular weekly samples from Kano, Zaria, Minna, Jos and Sokoto showed satisfactory results from Kano and Zaria but somewhat variable quality from Sokoto and Minna. Jos supply is at present unchlorinated and will remain variable until further treatment plant is obtained. Somewhat less frequent samples from Enugu, Aba, Onitsha, Warri and Calabar indicated a generally satisfactory supply at Enugu, Warri and Calabar but the Onitsha supply was occasionally unsatisfactory while the quality of the unusually satisfactory supply at Aba had deteriorated markedly as compared with the past ten years.

TABLE XXVIII—BACTERIOLOGICAL WATER SAMPLES

Supply	Total No.	Presumptive Coliform test samples classed by probable No. of Bacteria of Coliform group present per 100 c.c. of sample per cent of total samples			
		Class I < 1	Class II 1-2	Class III 3-10	Class IV > 10
LAGOS					
Raw Water	24	—	—	—	100
Settled Water	24	17	33	25	25
Filtered Water	24	38	25	33	4
Treated water ex Waterworks (Chlorinated)	200	98.5	0.5	1	—
Supply (Taps and Standpipes)	825	92.6	0.8	1.7	0.9
IBADAN					
Raw Water	21	—	—	10	90
Settled Water	21	14	19	38	29
Filtered Water (Unchlorinated)	76	32	39	14.5	14.5
Treated water ex Waterworks (Chlorinated)	276	97	1	2	—
Supply (Taps and Standpipes)	534	90	4	3	3
KADUNA					
Raw Water	46	—	—	—	100
Settled Water	46	2	2	28	68
Filtered Water	46	13	4	39	44
Treated Water (Chlorinated)	341	92	3	3	2
Supply (Taps and Standpipes)	284	86	4	6	4
ZARIA					
Treated Water ex Waterworks (Chlorinated)	46	92	4	—	4
Supply (Taps and Standpipes)	131	90	4	2	5
KANO					
Raw Water	2	—	—	50	50
Treated Water ex Waterworks (Chlorinated)	19	95	—	—	5
JOS					
Raw Water	39	20	3	13	64
Treated Water (Unchlorinated)	13	15	—	31	54
Supply (Taps and Standpipes)	163	58	6	11	25
ENUGU					
Supply (Chlorinated)	64	94	—	3	3
ABA					
Supply (Unchlorinated)	44	46	76	14	34
PORT-HARCOURT					
Supply (Unchlorinated) (Taps and Standpipes)	272	100	—	—	—
ONITSHA					
Intake Well	7	29	14	—	57
Supply	45	60	—	20	20
ILORIN					
Supply—Taps and Standpipes (Chlorinated)	45	73	11	11	5

TABLE XXVIII—BACTERIOLOGICAL WATER SAMPLES—*continued*

Supply	Total No.	Presumptive Coliform test samples classed by probable No. of Bacteria of Coliform group present per 100 c.c. of sample per cent of total samples			
		Class I < 1	Class II 1-2	Class III 3-10	Class IV > 10
WARRI					
Treated Water ex Waterworks (Unchlorinated)	9	78	—	22	—
Supply (Taps and Standpipes) (Unchlorinated)	36	66	12	18	4
MINNA					
Raw Water	48	31	9	6	54
Filtered Water	12	8	16	50	26
Treated Water ex Waterworks (Chlorinated)	36	86	3	3	8
Supply (Taps and Standpipes)	265	60	8	12	20
SOKOTO					
Raw Water	37	14	5	8	75
Filtered Water	37	54	5	21	20
Treated Water ex Waterworks (Chlorinated)	43	86	2	7	5
Selling Stations	105	48	10	13	29
Supply (Taps and Standpipes)	116	83	6	5	6
ABEOKUTA					
Raw Water	4	—	—	25	75
Treated Water ex Waterworks (Unchlorinated)	3	—	—	100	—
Supply (Taps and Standpipes)	15	40	—	20	40
CALABAR					
Well	9	33	—	22	45
Supply (Chlorinated)	51	84	—	12	4
BADAGRY					
Wells	16	19	6	6	69
UMUAHIA					
Wells	12	25	12	38	25
Supply (Chlorinated)	12	77	15	—	8
VICTORIA					
Well	4	—	—	—	100
Spring	9	33	—	22	45
Supply (Taps, etc.)	7	57	—	—	43

TABLE XXIX—RURAL WATER SUPPLY STATISTICS

Province	Wells Completed No.	1953-54 Footage Sunk Ft.	Other Projects Nos.	Drilling Ft.	Expenditure During Year £
NORTHERN REGION					
Adamawa	75	4,476	—	—	11,993
Bauchi	81	10,233	—	190	13,493
Benue	43	2,373	—	—	5,540
Bornu	92	12,085	—	1,917	30,967
Ilorin	70	3,371	—	—	6,688
Kabba	—	—	—	—	—
Kano	287	20,203	—	5,005	31,850
Katsina	101	8,398	—	119	12,117
Niger	112	4,411	—	1,805	7,720
Plateau	33	1,638	—	—	2,028
Sokoto	186	10,385	—	—	19,975
Zaria	107	5,293	—	20	7,113
Total	1,187	82,866	—	9,056 Wells 35	149,484
EASTERN REGION					
Bamenda	—	—	—	—	—
Calabar	—	—	—	—	—
Cameroons	1	105	—	—	990
Ogoja	13	209	3	—	1,391
Onitsha	1	44	63	—	8,121
Owerri	17	1,500	—	340	3,384
Rivers	30	761	—	—	3,831
Total	62	2,619	66	340 Wells 1	17,717
WESTERN REGION					
Abeokuta	—	—	—	—	—
Benin	—	—	—	1	1,155
Colony	20	No returns	—	—	689
Ibadan	153	3,948	—	—	5,818
Ijebu-Ode	—	—	—	—	—
Ondo	85	2,297	2	—	5,295
Oyo	73	1,915	—	—	5,782
Delta	54	1,210	—	—	1,602
Total	385	9,370	3	1,155 Wells 4	25,245
Grand Total	1,634	94,855	69	10,551 Wells 40	£192,446

CHAPTER IX—MECHANICAL BRANCH

1. *General.*—As mentioned in last year's Report the Sawmills, Stores and newly formed Electrical Section are now all part of the Mechanical Branch. Recruiting to the Electrical Section has been slow and at the end of the year it had only been possible to recruit the two Inspectors of Works (Electrical).

2. The delivery position of plant and vehicles from the United Kingdom improved considerably during the year. Only in a few instances where equipment was very urgently required was it necessary to buy locally.

3. The Senior Staff position has deteriorated ; this matter is dealt with more fully later.

4. As in the previous year the air conditioning and refrigeration commitments continued to extend, and details will be found below. It has not yet been found possible to fill the post of Heating and Ventilating Engineer, but three Inspectors (Air Conditioning and Refrigeration) were recruited during the year.

5. Central, Regional and provincial workshops were kept fully occupied, servicing and repairing the large amount of plant, vehicles and equipment now held by the Department, as will be seen from Table XXXIII.

6. The appointment of mechanical and electrical consulting engineers in London was mentioned last year. These consultants have proved of very great value in advising on special equipment and drawing up plans for advanced air conditioning and electrical work.

7. Besides continuing to run courses begun at the Mechanical School, Abeokuta, a series of courses were started for plant operators of heavy earth moving equipment. The initial course, attended by senior staff, was run by one of the manufacturer's representatives.

8. *Senior Staff.*—Thirty-one per cent of posts in the Senior Staff remained unfilled at the end of the year. The greatest deficiencies were in the Inspector of Works grade. There was also a falling off in the strength of Mechanical Engineers.

9. This shortage placed a severe strain on the Branch, especially as its duties and responsibilities are increasing, and in effect meant that many of the provincial workshops were without a Mechanical Inspector, and that the staff of both central and regional workshops was seriously depleted.

10. The following table shows the position of the Senior Staff in the long grade at the end of the year.

TABLE XXXII—MECHANICAL STAFF

	<i>Authorised at 1st April, 1953</i>			<i>Actual strength 31st March, 1954</i>			<i>Per Cent</i>
	<i>Perm.</i>	<i>Temp.</i>	<i>Total</i>	<i>Perm.</i>	<i>Temp.</i>	<i>Total</i>	
Chief Mechanical Engineer	1	—	1	—	1	1	100
Senior Executive Engineers	4	—	4	4	—	4	100
Senior Electrical Engineers	1	—	1	1	—	1	100
Mechanical Engineers	12	13	25	2	17	19	76
Electrical Engineers	1	—	1	—	—	—	—
Assistant Works Managers	6	—	6	3	1	4	66
Chief Inspectors of Works	5	—	5	1	2	3	60
Inspectors of Works	29	24	53	9	25	34	64
TOTAL	59	37	96	20	46	66	69

11. *Junior Staff*.—Nine applicants were selected last year for training as Engineering Assistants. Of these, five did not complete the first year's course. In fact the general wastage was so high that there were insufficient candidates to make it practicable for the Technical Institute to hold a Second Year's Course. The remaining four Engineering Assistants therefore spent their second year obtaining practical experience in Mechanical Workshops. It is becoming increasingly difficult to find suitable candidates for training as Engineering Assistants.

12. During the period under review the following Junior Staff have passed through the Mechanical School, Abeokuta.

Vehicle Mechanics	..	..	..	..	27
Plant Mechanics	..	..	..	..	11
Electricians	..	..	..	..	5
Turners	..	..	..	..	1
Fitters	..	..	..	..	9
Blacksmiths	..	..	..	..	4
Asst. I.O.Ws.	..	..	..	..	3
TOTAL					60

The duration of each course was three months with the exception of the courses for Assistant Inspectors of Works, which lasted four months.

13. Towards the close of the year a Central School was established for the training of Operators of heavy earth moving equipment. To-date, besides the initial course attended by Senior Staff, two courses of one months' duration have been run, each consisting of eight Grader Operators. The first week is spent in instruction in lubrication and routine maintenance supplemented by films lent by the local Agents. The remaining three weeks are spent on a site of works operating the machines on actual constructional work. The results obtained from these first two courses have been most satisfactory, subsequent courses will also be run for Bulldozer Operators.

14. *Mechanical Workshops*.—Spares still continued to be difficult to obtain. In some instances delays have been from nine to twelve months. This had an adverse effect on the engine overhaul exchange scheme at the Central Workshops. The total number of engines overhauled was only sixty-five and some seventy engines were still awaiting overhaul at the end of the year because of spares shortages. Owing to the fact that Stores held good stocks of new engines the hold up was not as bad as it might have been, and there is no doubt that the scheme has carried the Department over a difficult period, whilst regional workshops were building up their facilities.

15. Production again showed an increase in spite of staff shortages and other difficulties, as will be seen by the following Table which compares the value of the output of the various workshops with previous years.

TABLE XXXIII—OUTPUT OF WORKSHOPS

	1950-51	1951-52	1952-53	1953-54	No. of Jobs completed 1953-54	Average Cost per Job
	£	£	£	£		£ s
Ijora—Central	38,438	44,156	59,136	82,046	4,659	17 10
Ibadan—West	23,378	33,661	42,393	53,182	3,499	15 4
Kaduna—North	20,344	26,566	25,542	28,176	3,402	8 6
Port Harcourt—East ..	9,705	8,875	10,655	7,826	1,171	6 14
TOTAL	91,865	115,258	137,726	171,230	12,731	13 9
PERCENTAGE	380	480	570	709	—	—
<i>Provincial Workshops :</i>						
Western Region	6,200	12,014	15,090	16,609	2,889	5 15
Northern Region	19,590	22,069	57,758	63,829	11,702	5 9
Eastern Region	6,445	9,857	12,076	14,618	4,954	2 19

Note.—No accurate records available for Provincial Workshops until 1950-51.

16. *Air Conditioning and Refrigeration.*—The establishment during the year of one Chief Inspector and three Inspectors of Works was filled, but as mentioned previously, the Heating and Ventilating Engineer's post remained vacant. The urgent need has arisen to train further Junior Staff to meet increasing commitments for operation and maintenance of air conditioning plant. The section has been working to full capacity and besides the routine work of maintaining and repairing Government domestic refrigerators it has carried out the following installations :—

New Mortuary General Hospital, Lagos.
Cold Room, Medical Stores, Oshodi.
His Excellency's Office (Air Conditioning).
Yellow Fever Vaccine Mouse Colony Cold Store, Yaba.
General Hospital, Bacteriological Laboratory (Air Conditioning).
Records Library, Nigerian Broadcasting Service (Air Conditioning).

17. The following installations being installed or planned :—

Supreme Court, Lagos (Air Conditioning).
Kano Terminal Airport (Air Conditioning).
Ibadan Teaching Hospital (Air Conditioning).
Lagos Museum (Air Conditioning).
Broadcasting House (Air Conditioning).
Veterinary Research Laboratory, Vom, Cold Store.
Medical Cold Store, Kaduna.
Posts and Telegraphs Workshop (Air Conditioning).

18. The following Plant was maintained :—

House of Representatives (Air Conditioning).
Survey Department (Air Conditioning).
Igbobi Hospital (Air Conditioning).
Yellow Fever Vaccine Laboratory, Cold Store.

The total number of fixed plant inspections and repairs during the year was one hundred and twenty-two.

19. Considerable experience was gained of the problems of air conditioning in the tropics, and close liaison was kept with the consultants in London, who paid two visits to the country during the year.

20. *Plant and Vehicles.*—Delivery of plant and vehicles improved greatly during the year and prices stabilized. The policy of standardization was adhered to as much as possible. At the same time the possibilities of new types of equipment were kept in mind, and several different items of plant were ordered for testing.

21. Most of the equipment on indent for the Central Plant Pool was received during the year. The total value, including plant and vehicles still on Indent was approximately one million pounds. This plant was reserved for special works and for augmenting Regional Plant used on Central works.

22. Representatives of numerous manufacturers of vehicles and plant visited the Department during the year and it was pleasing to note that the emphasis was being placed on after-sales service. Such visits were welcomed as it was often possible to discuss operating difficulties on the spot. A number of manufacturers intimated that they were seriously considering having full-time engineers and repair facilities in this country.

23. In view of staff shortages and the amount of heavy earth moving equipment now on Departmental charge, arrangements were made towards the end of the year for the local representatives' factory trained service staff to inspect all bulldozers and graders every three months. By this means it is hoped that a much stricter check on the maintenance in the field of this expensive equipment will be carried out. Such inspections bring to light defects which can be remedied at Regional or provincial workshops before they become serious.

24. The expenditure on plant and vehicles during the last few years has been as follows :—

TABLE XXXIV—PURCHASES PLANT AND VEHICLES

Year	Roads	Urban Water	Building	Rural Water and Drilling	Replacement of plant and vehicles	Special Works	Total
1944-45	4,170	—	752	—	—	—	4,922
1945-46	8,139	1,666	1,204	9,565	3,892	—	24,466
1946-47	57,405	22,307	10,072	24,065	11,610	—	125,459
1947-48	52,801	23,765	1,569	33,935	14,093	—	126,163
1948-49	83,635	31,415	13,924	27,339	20,762	—	177,075
1949-50	204,866	72,834	20,512	60,710	11,856	—	370,778
1950-51	86,634	39,884	8,231	56,260	15,775	—	206,784
1951-52	13,827	23,927	19,389	32,515	34,168	35,645	159,471
1952-53	193,719	39,793	40,828	82,782	67,726	137,889	562,737
1953-54	25,676	40,359	56,040	11,999	75,642	311,020	520,736

25. The number of motor vehicles on charge at the end of the year compared with previous years was as follows :—

TABLE XXXV—MOTOR VEHICLES

	1950-51	1951-52	1952-53	1953-54
Cars	64	87	90	88
Lorries	396	469	469	733
Motor Cycles	36	34	33	33
TOTAL	496	590	772	854

26. *Electrical Section.*—This section which was formed last year has an establishment of one Senior Electrical Engineer, two Electrical Engineers and two Inspectors of Works. All posts have been filled with the exception of one Electrical Engineer. To cope with the influx of work now handled by this section, its establishment is to be increased and a workshop is to be built for the repair of fans, water heaters, electric motors, etc. Steps will have to be taken to recruit and train Junior Staff. At present there are no similar sections in the Regions, but action is being taken in two Regions for their formation.

27. The following major works are in hand or planned :—

- Re-electrification of the Sawmills.
- Re-electrification of the Central Workshops.
- New Supreme Court, Lagos.
- Teaching Hospital, Ibadan.
- Airport Terminal Building, Kano.
- Mental Hospital, Abeokuta.

28. Minor works in hand or planned :—

- Security lighting at Public Works Department Stores.
- Sawmills and Mechanical Workshops, Ijora.
- Posts and Telegraphs Workshops, Ijora.
- King's College Extension.
- Lagos Museum.
- Maintenance and rewiring programme.

29. *General Administration.*—A Regional Mechanical Engineers' Conference was held in Lagos at the latter end of the year. Views were exchanged on the major problems facing the Mechanical branch with the coming into effect of the New Constitution next year.

30. The Spares Scaling Committee, which has met regularly two to three times a week for the past two years to determine spares stocks for all types of plant and vehicles, has completed its primary task. Meetings are now only held when it is necessary to review the position such as when additional equipment is purchased.

CHAPTER X—SAWMILLS AND WOODWORKING SHOPS, IJORA

The demand from many sources for Sawmill products fell considerably during the year, causing a marked reduction in both output and issues. The Public Works Department and the Railway were the only exceptions, taking between them a total of eighteen thousand cubic feet more than in the previous year, but this extra quantity failed to make up for the reduced demand from other Departments and from the general public. The Railway would have taken even more, had the species they required been available, but an acute shortage of Mahogany and Opepe made it impossible to meet all their demands.

2. The total output from the Sawmill was 320,974 cubic feet, compared with 385,299 cubic feet for the previous year, and issues fell from 367,136 cubic feet, to 318,484 cubic feet. These reductions in output and issue were reflected in the amount paid out for wages which was about £4,200 less than in 1952-53.

3. Electricity charges were £2,011 higher than for the previous year. The average cost of logs was four-pence per cubic foot higher. Despite these higher costs however, the issue price for timber remained at the same level. The Timber Trading Account showed a very reasonable profit of £7,521.

4. Great difficulty was again experienced in obtaining certain species of logs. Of the 3,340 Mahogany logs ordered, only 1,117 were delivered. 1,320 Opepe logs were ordered but only 491 were delivered.

5. The scheme for the extension of the Sawmill proceeded slowly throughout the year. It again disorganised production, and again raised production costs. The re-roofing of the main Sawmill was not completed until September. When this was finished new water mains were laid in the yard and in the mill, and at the same time the re-wiring of all the electric motors commenced. It is expected that with the completion of all this work, production costs will become much lower.

6. The demand for furniture was also less than in previous years, although during the last two months several large orders were received. The issue value fell from £54,133 in 1952-53 to £48,507. Once again the amount paid out in wages was lower than in the previous year, being £21,548 compared with £22,482.

TABLE XXXVI—SAWMILL

	Cubic Feet	Value £
Logs purchased	(7,486)	478,678
Output		320,974
Issues		318,484
Stock of Sawn Timber at 31-4-54		69,171
Stocks of logs at 31-4-54		263,853
		58,291

TABLE XXXVII—DISTRIBUTION OF SAWN TIMBER FROM GOVERNMENT STOCKS—CUBIC FEET

Species	P.W.D.	Railway	Other Depart- ments	Native Administra- tions	Cash Sales	Total Cubic feet
Abura	10,918	8,763	8,075	505	3,157	31,418
Black Afara	201	219	992	254	235	1,901
White Afara	1,545	69	1,435	42	2,940	6,031
Agba	3,319	3,331	3,656	797	1,095	12,198
Apa	4,516	3,059	1,294	96	868	9,833
Iroko	898	155	62	70	472	1,587
Lofun	2,399	1,913	1,020	5,461	2,652	5,495
Mahogany	30,623	8,367	7,327	13	13	54,430
Mansonina	97	131	18	32	734	291
Canarium	388	21	485	47	349	1,675
Olugbondu	1,403	3,860	939	973	2,108	19,424
Ekui	6,659	7,243	2,403	1,011	3,667	8,203
Ojia	2,341	25	2,170	—	3,667	19,082
Opepe	7,394	6,469	3,600	148	—	2,172
Oro	452	322	1,398	2,048	2,819	26,071
Sapele wood	11,698	5,603	3,903	136	604	10,144
Sida	6,781	2,154	469	172	12,425	64,571
Arere	24,755	2,075	25,144	835	4,585	35,559
Agboin	12,677	14,202	3,260	—	—	83
Cordia	17	—	25	600	120	42
Short Ends	—	—	113	—	—	833
TOTAL	129,081	67,981	67,788	13,227	40,407	318,484

Contribution to Revenue		£	s	d
Profit on Timber Trading Account	.. .. .	7,521	18	1
Store Charges on timber	.. .. .	3,707	2	11
Profit on Workshops Account	.. .. .	742	6	1
Store Charges on furniture	.. .. .	661	18	5
TOTAL .. .. .	.. .. .	£12,633	5	6

TABLE XXXVIII—SAWMILL ACCOUNT

	£	s	d	£	s	d		£	s	d	£	s	d
<i>To opening Stock :</i>													
Logs	71,377	18	2										
Sawn timber	31,160	13	9										
				102,538	11	11							
<i>To purchase of logs</i>				103,383	6	3							
<i>To landing and stocking of logs</i>	2,016	13	6										
<i>To sawing and maintaining saws</i>	15,981	19	1										
<i>To stacking and seasoning sawn timber</i>	5,597	1	10										
<i>To Planing</i>	2,489	17	0										
<i>To Issuing and loading including rail freight</i>	7,298	2	8										
<i>To Removal of sawdust</i>	1,001	12	4										
				34,385	6	5							
<i>To Declared revenue</i>				7,521	18	1							
				<u>£247,829</u>	<u>2</u>	<u>8</u>							
<i>By Issues and sales of :</i>													
Sawn timber	155,961	9	3										
Sawn firewood	1,300	11	7										
				<u>157,262</u>	<u>0</u>	<u>10</u>							
<i>By closing stock :</i>													
Logs	58,291	9	3										
Sawn timber	32,275	12	7										
				<u>90,567</u>	<u>1</u>	<u>10</u>							
											<u>£247,829</u>	<u>2</u>	<u>8</u>

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CHAPTER XI—STORES BRANCH

The value of receipts and issues for the year under review totalled £8,444,987, less by £114,624 than the 1952-53 turnover. Receipts from all sources were valued at £4,256,398, which was £457,088 less than the previous year. The value of the issues was £4,188,589 which was an increase of £342,464 over the previous year.

2. During 1952-53 the value of receipts was £867,352 in excess of the issues for that year but during the year 1953-54 the difference between receipts and issues was only £67,809. This levelling out between the value of receipts and issues was mainly due to restricted buying of steel and roofing sheets in order to reduce the stocks of these materials.

3. The value of materials in stock at the 31st March, 1954 was £1,999,164 an increase of £67,809 on the value of stock at the 31st March, 1953.

4. The value of issues to P.W.D. Votes, Native Administrations, other Government Departments and Development Schemes, the percentage of the total issues and the increase or decrease over the previous year are as shown in the following schedule :—

TABLE XL

To whom issued	Value of Issues 1953-54		% of Total Issues	Value of Issues 1952-53		% of Total Issues	Increase or Decrease
	£	£		£	£		
Public Works Department		2,203,370	52.5		1,642,214	42.0	+ 561,156
Native Administrations ..		463,704	11.0		316,250	8.0	+ 147,454
Other Government Departments		206,459	5.0		168,778	4.5	+ 37,681
Workshop Suspense Account		251,023	6.0		245,505	6.5	+ 5,518
Development and Welfare Schemes	588,379			355,080			
Development Loan Expen- diture	256,668	845,047	20.0	812,562	1,367,642	36.0	- 522,595
Credit Adjustments ..		218,986	5.5		105,736	3.0	+ 113,250
		4,188,589	100		3,846,125	100	

5. An interesting feature of the issues for the year was the value of materials issued to Development Schemes which at £845,047 was £522,595 less than 1952-53. The value of issues to P.W.D. votes at £2,203,370 was £561,156 greater than during the previous year.

6. The Native Administrations continued to use the facilities offered by these Stores, the value of issues to them was £463,704, an increase of £147,454 over the previous year.

7. The value of issues to other Government Departments was £206,459 an increase of £37,681 over the previous year.

8. The distribution of materials throughout Nigeria during the year was reasonably satisfactory. Road transport was again used for the conveyance of materials to stations in the Western Region. Road transport was also extensively used to clear materials from Apapa wharf. During the year a Senior Service Storekeeper was posted to manage the sub-store at Victoria. This store provided a very useful source of supply for works being carried out in the Southern Cameroons.

9. The Balance Sheet for the year was as follows :—

TABLE XLI

ANNUAL FINANCIAL REPORT 1953-54

Details of Receipts	Amount			Total			Region	Vote of Charge	Amount			Total		
	£	s	d	£	s	d			£	s	d	£	s	d
To Stock Balance at 31-3-53				1,931,354	14	8								
To Crown Agents	3,538,282	3	1				Central	Public Works Department	1,484,951	15	4			
To Transfers from Other Departments	34,299	7	6					Workshop Suspense Account	251,022	18	9			
To Local Purchases	523,852	16	3					Other Departments	78,066	1	1			
To Conversions	43,461	14	4					Development and Welfare	77,709	6	3			
To M.E.S. Credits	71,461	5	6					Development Loan Expenditure	27,158	4	6			
To Transport and Labour	192,835	16	7					Credits Adjustments	218,986	7	8	2,137,894	13	7
	<u>4,404,193</u>	<u>3</u>	<u>3</u>											
Less Debit Adjustment	147,795	3	0	4,256,398	0	3	Northern	Public Works Department	381,449	10	1			
								Native Administration	295,081	8	3			
								Other Departments	51,330	19	1			
								Development and Welfare	313,823	5	8			
								Development Loan Expenditure	71,782	2	5	1,113,467	5	6
							Western	Public Works Department	226,175	12	5			
								Native Administration	134,006	6	11			
								Other Departments	37,173	2	1			
								Development and Welfare	106,566	17	1			
								Development Loan Expenditure	101,492	11	11	605,414	10	5
							Eastern	Public Works Department	110,792	11	9			
								Native Administration	34,616	7	4			
								Other Departments	39,889	2	11			
								Development and Welfare	90,279	1	3			
								Development Loan Expenditure	56,235	6	2	331,812	9	5
								Stock Balance at 31-3-54				4,188,588	18	11
												1,999,163	16	0
												<u>£6,187,752</u>	<u>14</u>	<u>11</u>

£6,187,752 14 11

£6,187,752 14 11

10. Office Statistics are as follows :—

Year	No. of Indents Placed	No. of C.A. P.Vs.	Stores Requisitions received				Store Issue Vouchers		
			Ijora	Port Harcourt ..	Kaduna ..				
1950-51	700	8,522	Ijora	26,634	979	32,082	416		
			Port Harcourt ..	11,347				45,541	2,780
			Kaduna ..	7,560					8,620
1951-52	860	8,475	Ijora	39,417	53,765	27,173	43,482		
			Port Harcourt ..	7,333				62,194	6,294
			Kaduna ..	7,015					9,670
1952-53	846	10,303	Ijora	44,735	62,194	33,833	43,137		
			Port Harcourt ..	9,591				54,330	7,474
			Kaduna ..	7,868					13,023
1953-54	1,121	9,454	Ijora	48,799	67,390	48,799	72,808		
			Port Harcourt ..	9,916				54,330	8,173
			Kaduna ..	8,684					15,836

UNALLOCATED STOCK BALANCES AT 31st MARCH

								£	£	
1951	Ijora and Sub-Stores .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	485,207	553	
								Port Harcourt		112,828
								Kaduna		163,145
1952	Ijora and Sub-Stores .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	697,203	761,180	
								Port Harcourt		132,650
								Kaduna		234,141
1953	Ijora and Sub-Stores .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	1,372,081	1,063,994	
								Port Harcourt		228,838
								Kaduna		330,436
1954	Ijora and Sub-Stores .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	1,336,536	1,931,355	
								Port Harcourt		293,958
								Kaduna		368,670
								1,999,164		

VALUE OF STORES RECEIVED AND ISSUED

Year	Receipts				Issues		Total
	£				£	£	
1950-51	Ijora	1,995,363	2,554,236	1,955,745	5,007,844
	Port Harcourt .. .. .	.. .. .	.. .. .	268,503		254,130
	Kaduna .. .. .	.. .. .	.. .. .	290,370		243,733
1951-52	Ijora and Sub-Stores	2,313,155	2,929,089	2,083,912	5,555,364
	Port Harcourt .. .. .	.. .. .	.. .. .	303,726		289,110
	Kaduna .. .. .	.. .. .	.. .. .	312,208		253,253
1952-53	Ijora and Sub-Stores	3,813,294	4,713,486	3,188,836	8,559,611
	Port Harcourt .. .. .	.. .. .	.. .. .	515,117		246,187
	Kaduna .. .. .	.. .. .	.. .. .	385,075		411,102
1953-54	Ijora and Sub-Stores	3,346,497	4,256,398	3,357,310	8,444,989
	Port Harcourt .. .. .	.. .. .	.. .. .	391,006		275,091
	Kaduna .. .. .	.. .. .	.. .. .	518,895		556,188

11. The following tonnages were received :—

	<i>Tons</i>
Lagos-Apapa	62,358
Port Harcourt	13,114
Other Ports	10,000 (Approx.)
	<hr/>
	85,472
	<hr/>

12. Of the 62,358 tons received through Lagos-Apapa, 43,593 tons were cement. Issues from Ijora included the following items :—

Cement	824,000	Bags
Asbestos Cement and Galvanised Iron Roof Sheets	127,640	No.
Asbestos Cement Celotex Flats Sheets	29,350	No.
Cylinders Oxygen, Acetylene, Chlorine, etc.	999	No.
Pipes M.S. Rods	42,500	Lengths
Oils and Paints	26,500	Tins
Nails, Bolts and Nuts, etc.	2,200	Bags
Road Dressings	36,450	Drums
Asbestos Cement and Galvanised Iron pipes	16,250	No.
Tyres and Tubes	4,465	No.
Mechanical and Plant Spares	26,000	Items Approx.
Miscellaneous Stores	13,961	cases

13. Of the 13,114 tons received through Port Harcourt, 10,399 tons were cement. The issues for the Regional Stores, Port Harcourt included the following :—

Cement	230,130	Bags
Paints and Oils	7,140	Drums
Bolts and Nuts	1,044	Bags
Roofing Sheets	46,404	No.
Road Dressings	5,830	Drums
M.S. Rods	26,782	No.
Water Pipes	4,579	Lengths
Miscellaneous	325	cases or crates
Petrol	52,704	gallons
Kerosene	1,372	gallons

14. Issues from the Regional Stores, Kaduna included the following :—

Cement	148,922	Bags
Miscellaneous Stores	1,753	cases or crates
Roofing Sheets	83,798	No.
M.S. Rods, Pipes etc.	61,051	No.
Oils and Paints	16,215	Drums and Tins
Bolts and Nuts	2,644	Bags
A.C. and C.I. Pipes	10,633	No.
Timber	97,223	Pieces

15. No large scale thefts occurred during the year.

APPENDIX I
TOTAL EXPENDITURE

	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	Central	Lagos	Western	Northern	Eastern
	£	£	£	£	£	£	£	£	£	£	£
<i>Public Works</i>											
Personal Emoluments and Other Charges											
(a) Chargeable to Overheads	363,889	359,769	438,266	474,100	575,978	659,693	173,678	45,034	137,803	182,058	121,120
(b) Chargeable to Works	76,600	94,336	100,879	94,819	115,195	131,938	34,736	9,007	27,561	36,411	24,223
Recurrent Maintenance Works	158,753	164,087	72,475	111,909	141,118	180,211	72,750	2,771	44,238	30,723	29,729
Other Items	785,966	961,449	1,087,407	1,243,423	1,582,881	1,851,871	54,205	321,682	412,272	767,443	296,269
Renewals Funds (Water)	6,938	3,196	31,415	77,928	42,256	36,942	—	25,188	—	577	11,177
Extraordinary	1,356,668	1,215,523	1,501,843	1,939,862	3,089,399	3,490,756	320,180	1,056,093	664,630	1,269,894	179,959
<i>Development</i>											
Personal Emoluments and Other Charges ..	124,179	140,743	244,912	287,383	359,521	399,581	42,570	15,621	68,498	234,559	38,333
Works	899,526	1,143,664	2,215,940	1,935,617	2,237,761	2,625,078	3,709	66,265	765,511	1,192,660	596,933
Plant and Vehicles	156,189	358,922	192,963	89,659	357,122	320,451	32,733	—	59,110	111,986	116,622
Consulting Engineers	10,146	7,580	2,133	—	—	—	—	—	—	—	—
£	3,938,856	4,449,269	5,888,233	6,254,700	8,501,231	9,696,521	734,561	1,541,661	2,179,623	3,826,311	1,414,365
<i>Loan</i>											
Water including Subventions	—	—	—	—	—	—	—	—	—	—	—
Sanitation	—	—	—	—	—	—	—	—	—	—	—
<i>Native Authority Works</i>											
Directly and fully supervised by P.W.D. Plans and Estimates prepared plus occasional supervision	645,265	543,315	815,649	612,023	739,155	626,389	—	—	225,276	388,882	12,231
Workshop Suspense Account	52,442	114,107	214,290	162,016	203,966	240,859	—	—	14,549	223,232	3,078
N.A. Works on which occasional assistance and advice is provided by P.W.D. Officials	96,110	72,293	26,333	(a) 66,737	42,333	122,078	42,895	—	21,984	29,149	28,050
Military and Air Ministry Expenditure	—	—	—	—	—	—	—	—	—	—	—
Expenditure in behalf of other Departments ..	—	—	—	25,695	40,862	13,663	—	997	—	12,666	—
Expenditure in respect of Regional Development Production Boards	29,627	8,142	2,189	103,715	152,822	89,352	5,301	3,622	11,157	42,975	26,297
£	—	—	—	—	182,680	95,284	—	—	88,803	6,481	—
£	823,444	738,157	1,058,461	970,186	1,361,818	1,187,625	48,196	4,619	361,769	703,385	69,656
<i>Maintenance Services</i>											
Water Supply	4,454	4,671	4,128	1,539	1,519	2,081	2,081	—	—	—	—
Cash Sales from Unallocated Stores Freight and Other Charges	39,871	28,058	38,435	81,462	424,100	571,857	571,857	—	—	—	—
Petrol Account	68,484	69,116	89,281	101,471	141,582	118,517	118,517	—	—	—	—
£	112,809	101,845	131,844	184,472	567,201	692,455	692,455	—	—	—	—
£	4,875,109	5,289,271	7,078,538	7,409,358	10,430,250	11,576,601	1,475,212	1,546,280	2,541,392	4,529,696	1,484,021

APPENDIX II

REGIONAL BREAKDOWN OF TOTAL EXPENDITURE DURING 1953-54

	1953-54	CENTRAL	WESTERN				NORTHERN		EASTERN	
			LAGOS COLONY		WESTERN PROVINCES		Central	Regional	Central	Regional
			Central	Regional	Central	Regional				
			£	£	£	£	£	£	£	£
<i>Public Works</i>										
Personal Emoluments and Other Charges	659,693	173,678	—	45,034	—	137,803	—	182,058	—	121,120
(a) Chargeable to Overheads	131,938	34,736	—	9,007	—	27,561	—	36,411	—	24,223
(b) Chargeable to Works	180,211	72,750	2,213	558	736	43,502	—	30,723	—	29,729
Recurrent Maintenance Works	1,851,871	54,205	270,063	51,619	131,501	280,771	379,866	387,577	122,398	173,871
Other Items	36,942	—	25,188	—	—	—	—	577	—	11,177
Renewals Funds (Water)	3,490,756	320,180	939,247	116,846	369,432	295,198	244,662	1,025,232	140,998	38,961
Extraordinary	—	—	—	—	—	—	—	—	—	—
<i>Development</i>										
Personal Emoluments and Other Charges	399,581	42,570	—	15,621	—	68,498	—	234,559	—	38,333
Works	2,625,078	3,709	—	66,265	—	765,511	—	1,192,660	—	596,933
Plant and Vehicles	320,451	32,733	—	—	—	59,110	—	111,986	—	116,622
Consulting Engineers	—	—	—	—	—	—	—	—	—	—
£	9,696,521	734,561	1,236,711	304,950	501,669	1,677,954	624,528	3,201,783	263,396	1,150,969
<i>Loan</i>										
Water including Subventions	—	—	—	—	—	—	—	—	—	—
Sanitation	—	—	—	—	—	—	—	—	—	—
<i>Native Authority Works</i>										
Directly and fully supervised by P.W.D.	626,389	—	—	—	—	225,276	—	388,882	—	12,231
Plant and Estimates prepared plus occasional supervision	240,859	—	—	—	—	14,549	—	223,232	—	3,078
Workshop Suspense Account	122,078	42,895	—	—	—	21,984	—	29,149	—	28,050
N.A. Works on which occasional assistance and advice is provided by P.W.D.	—	—	—	—	—	—	—	—	—	—
Military and Air Ministry Expenditure	13,663	—	997	—	—	—	12,666	—	—	—
Expenditure on behalf of other Departments	89,352	5,301	3,622	—	—	11,157	40,260	2,715	24,532	1,765
Expenditure in respect of Regional Development	—	—	—	—	—	—	—	—	—	—
Production Boards	95,284	—	—	—	—	88,803	—	6,481	—	—
£	1,187,625	48,196	4,619	—	—	361,769	52,926	650,459	24,532	45,124
<i>Maintenance Services</i>										
Water Supply	2,081	2,081	—	—	—	—	—	—	—	—
Cash Sales from Unallocated Stores Freight and Other Charges	571,857	571,857	—	—	—	—	—	—	—	—
Petrol	118,517	118,517	—	—	—	—	—	—	—	—
£	692,455	692,455	—	—	—	—	—	—	—	—
£	11,576,601	1,475,212	1,241,330	304,950	501,669	2,039,723	677,454	3,852,242	287,928	1,196,093
£	—	1,475,212	1,546,280	—	2,541,392	—	4,529,696	—	1,484,021	—
£	11,576,601	1,475,212	—	4,087,672	—	—	4,529,696	—	1,484,021	—

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APPENDIX III

REVENUE

	1950-51	1951-52	1952-53	1953-54
Water Supply	£ 87,156	£ 96,927	£ 61,581	£ 38,132*
Earning of Government Departments—P.W.D.	306,436	354,876	361,962	448,804
Reimbursements to Native Administrations	659	2,952	—	—
TOTAL	394,251	454,755	423,543	486,936

* For Lagos only. Previous years Revenue figures are for the whole country.

APPENDIX IV

PUBLIC WORKS EXTRAORDINARY

TOTAL EXPENDITURE FROM CENTRAL AND REGIONAL FUNDS

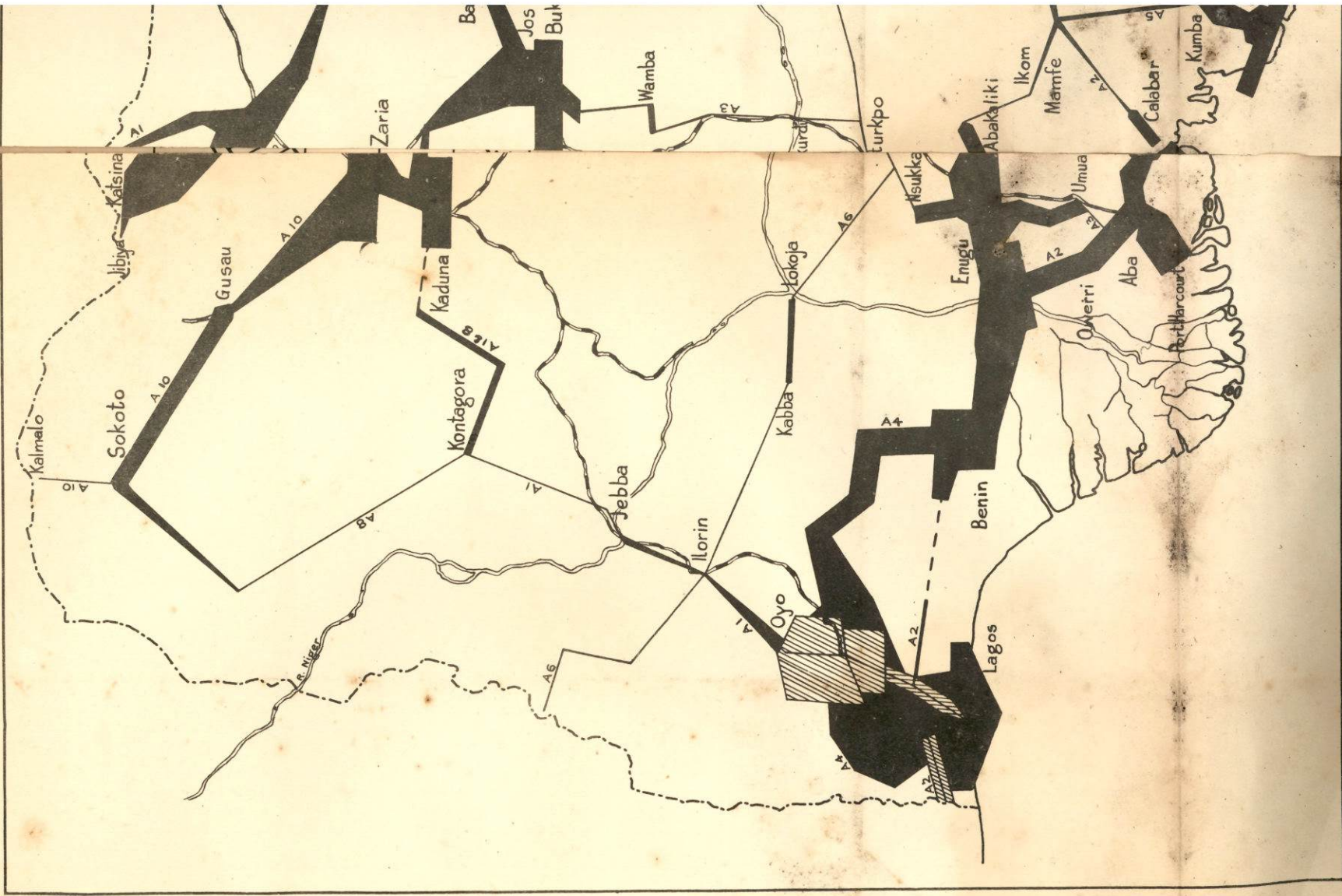
	£	£	£
Lagos and Colony (Central)	2,209	2,209	
<i>Western Region</i>			
Lagos			
Abeokuta Province	1,034,135		
Benin	18,803		
Ijebu-Ode	34,749		
Ondo	36,604		
Oyo	25,242		
Ibadan	19,978		
Delta (Warri)	175,358		
	33,969	1,378,838	
<i>Eastern Region</i>			
Calabar Province			
Victoria	44,954		
Bamenda	20,563		
Ogoja	15,720		
Onitsha	2,338		
Owerri	18,189		
Rivers	18,266		
Enugu Division	34,338		
	25,591	179,959	
<i>Northern Region</i>			
Adamawa Province			
Bauchi	27,710		
Benue	29,910		
Bornu	30,000		
Ilorin	45,163		
Kabba	14,582		
Kano	34,897		
Katsina	130,508		
Niger	69,654		
Plateau	2,4600		
Sokoto	247,103		
Zaria	47,708		
Kaduna Division	150,379		
	311,134	1,163,348	
<i>Military Buildings and Accommodation :</i>			
Central	29,901		
Western DD(C)	21,958		
Northern	29,140	80,999	
	£288,937	288,937	
Ibadan Teaching Hospital (West)			
Mechanical Plant			
Northern	77,406		
Western	30,990		
Central	288,070	396,466	3,490,756

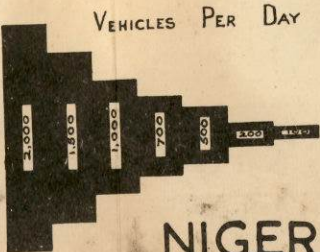
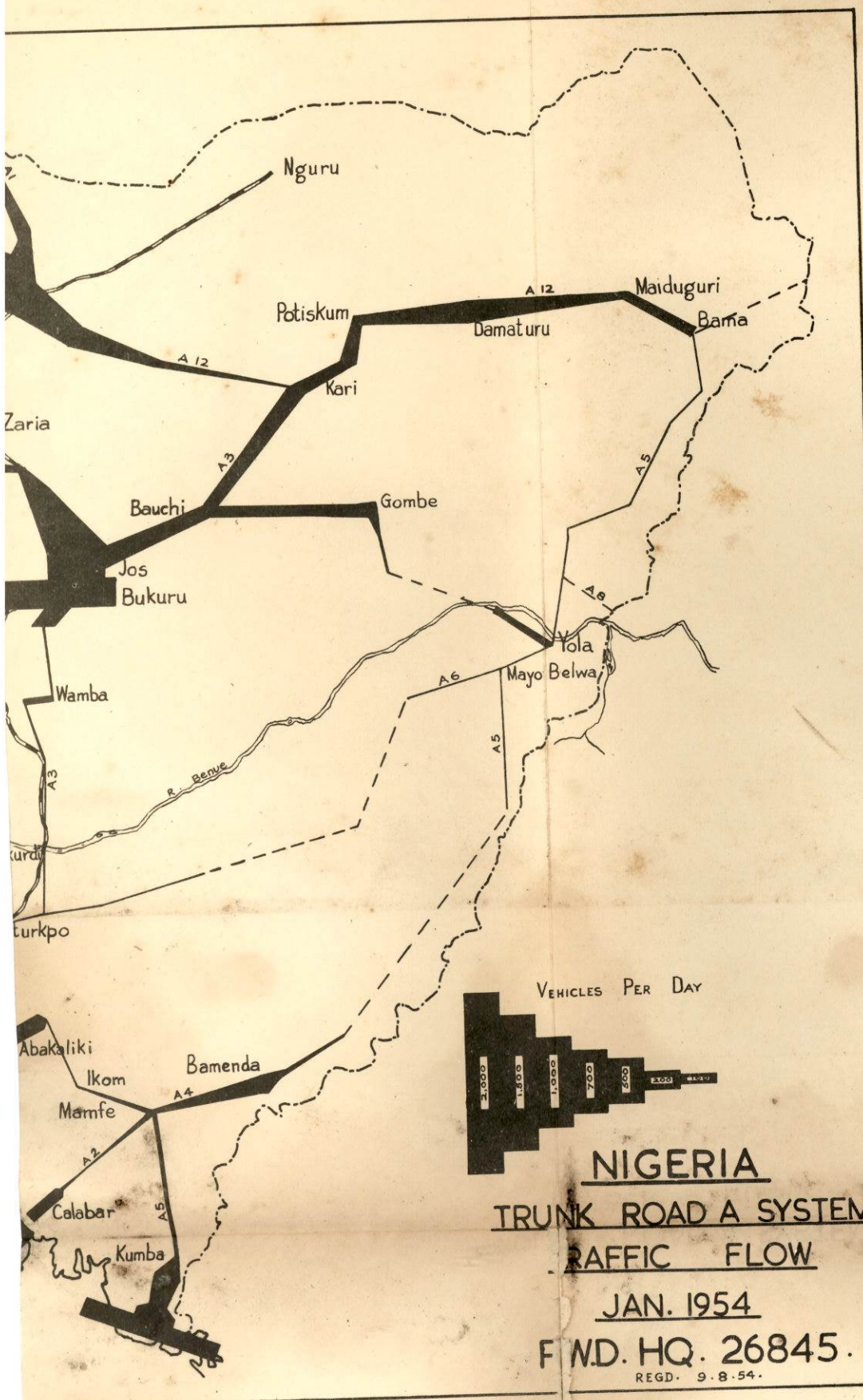
APPENDIX V

DEVELOPMENT SCHEMES—TOTAL EXPENDITURE TO 31st MARCH, 1954

	Roads	Rural Water Supplies	Urban Water Supplies	Buildings	Leprosy Control	Colliery Housing	Anti-Malaria	Gaskiya Corporation	Kumba-Mansa Road	Total
	£	£	£	£	£	£	£	£	£	£
Lagos (Central)	147,710	4,996	152,267	399,814	—	—	*31,610	—	—	736,397
Western										
Lagos D.D.(C)	52,414	599	56,202	167,687	—	—	—	—	—	276,902
Abeokuta	114,199	19,451	10,614	112,673	—	—	—	—	—	256,937
Benin	300,111	36,626	—	254,545	44,876	—	—	—	—	636,158
Ijebu	184,464	11,032	43,758	80,211	—	—	—	—	—	319,465
Ondo	179,770	35,224	5,178	51,390	—	—	—	—	—	271,562
Oyo	257,701	38,063	463,948	670,285	—	—	—	—	—	1,429,997
Delta	80,742	6,525	18,625	198,401	—	—	—	—	—	304,293
Eastern										
Calabar	288,033	29,192	2,067	110,956	—	—	—	—	48,820	430,248
Camerouns	479,373	4,670	—	132,425	—	—	—	—	—	665,288
Ogoja	311,042	22,916	18,853	118,243	—	—	—	—	—	471,054
Onitsha	39,707	60,542	43,883	86,407	65,034	39,351	—	—	—	295,573
Enugu	22,284	1,059	64,726	287,747	—	—	—	—	—	415,167
Owerri (Umuhia)	111,450	57,389	1,423	156,306	43,678	—	—	—	—	370,246
Rivers (Port Harcourt)	73,354	55,554	1,096	63,145	59,730	—	—	—	—	252,879
Northern										
Adamawa	373,528	63,482	3,861	108,701	—	—	—	—	—	549,572
Bauchi	120,745	81,966	21,444	82,808	—	—	—	—	—	306,963
Benue	51,913	25,147	—	271,591	—	—	—	—	—	348,651
Bornu	100,303	133,478	61,102	107,653	—	—	—	—	—	402,536
Ilorin	69,366	20,300	242,053	61,110	—	—	—	—	—	392,829
Kabba	17,702	6,389	17,706	107,458	—	—	—	—	—	149,255
Kano	212,301	168,313	67,850	135,930	—	—	—	—	—	584,394
Katsina	66,750	82,181	1,494	152,580	1,397	—	—	—	—	204,402
Niger	130,106	59,420	90,790	70,657	—	—	—	—	—	350,973
Plateau	223,445	6,594	9,748	222,685	—	—	—	—	—	462,472
Sokoto	184,689	102,078	68,216	138,586	—	—	—	56,485	—	493,569
Zaria	95,321	42,184	3,636	329,184	—	—	—	—	—	526,810
Kaduna	114,514	27,684	11,967	223,265	—	—	13,521	—	—	377,430
Plant	838,874	423,897	291,875	172,240	1,895	—	—	—	—	1,742,302
Consulting Engineers	30,314	—	12,504	—	—	—	—	—	—	42,818
Unallocated	395	110	—	887	—	—	—	—	—	1,392
Staff Salaries	432,923	451,145	252,153	517,515	—	—	—	—	—	1,653,736
	5,705,543	2,078,206	2,039,039	5,493,085	216,610	39,351	45,131	56,485	48,820	15,722,270

* Gira five Cowrie Creek.



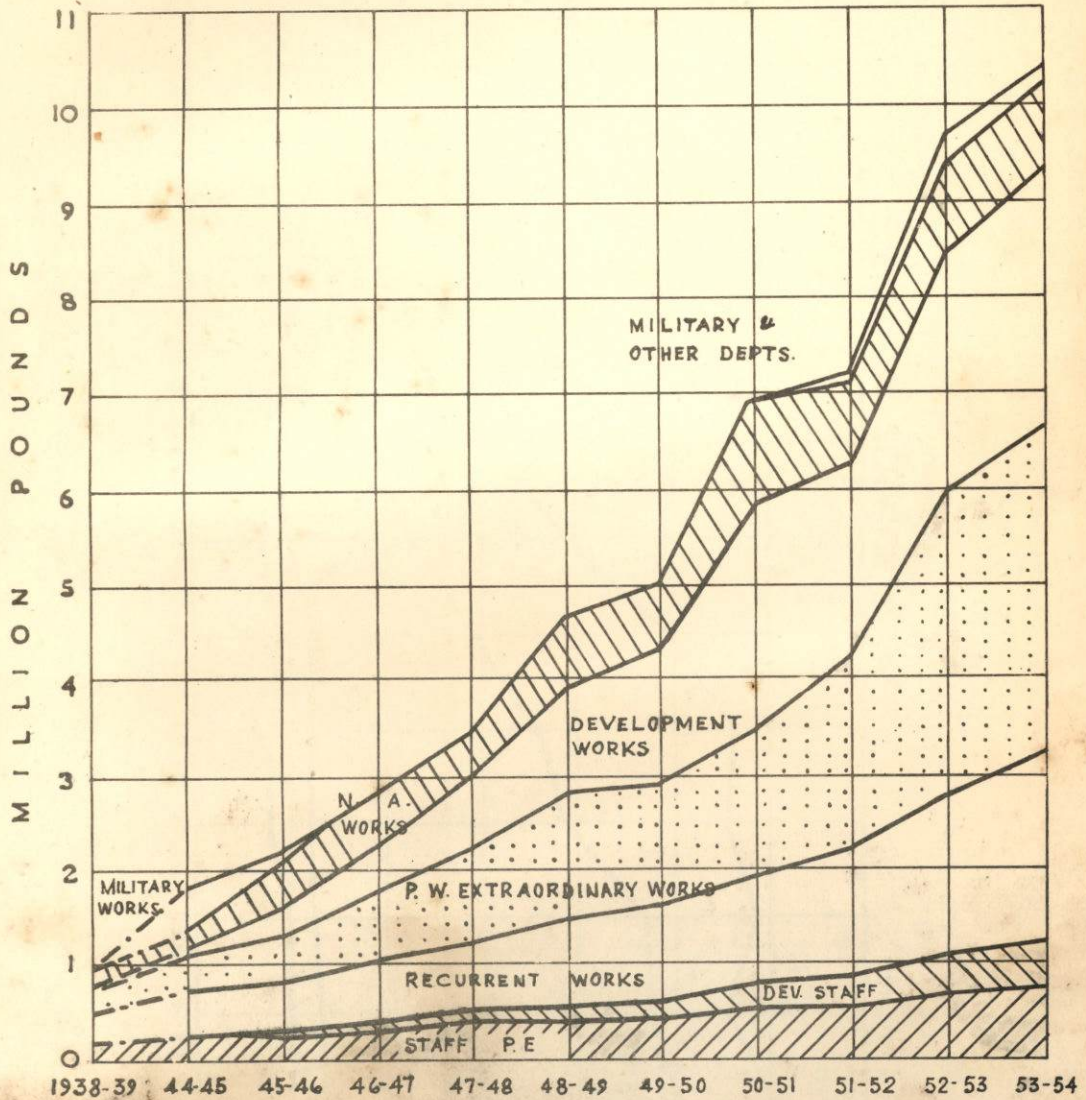


NIGERIA
TRUNK ROAD A SYSTEM
TRAFFIC FLOW

JAN. 1954
F.M.D. HQ. 26845.
 REGD. 9.8.54.

FIGURE 1 ANNUAL EXPENDITURE

NOTE: THIS CHART DOES NOT INCLUDE P. W. D.
MAINTENANCE SERVICES AND WORKSHOP SUSPENSE
ACCOUNT.



FSD 80/270-1/3-56

FIGURE 2

SENIOR SERVICE STAFF

FSD 80/270-2/3-56

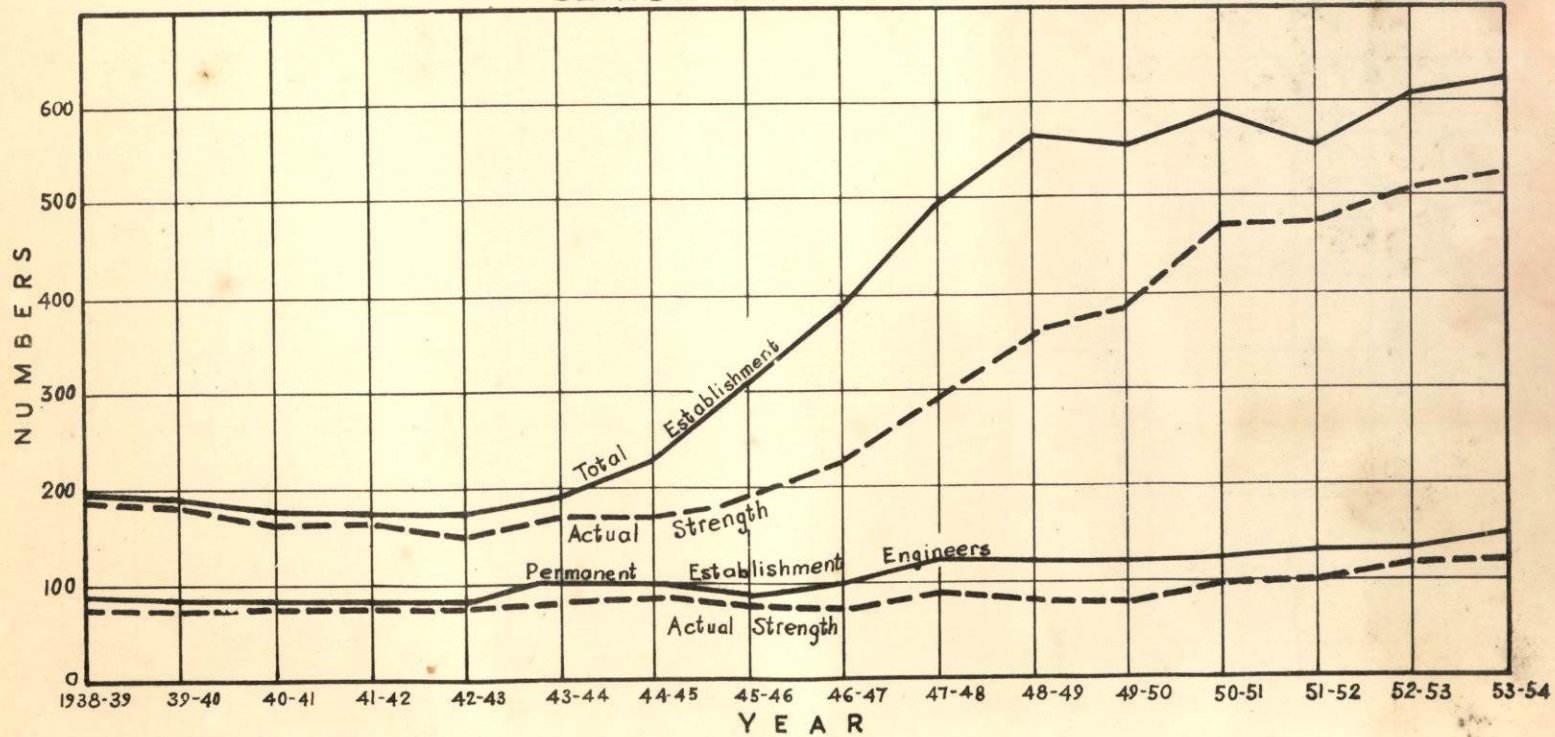
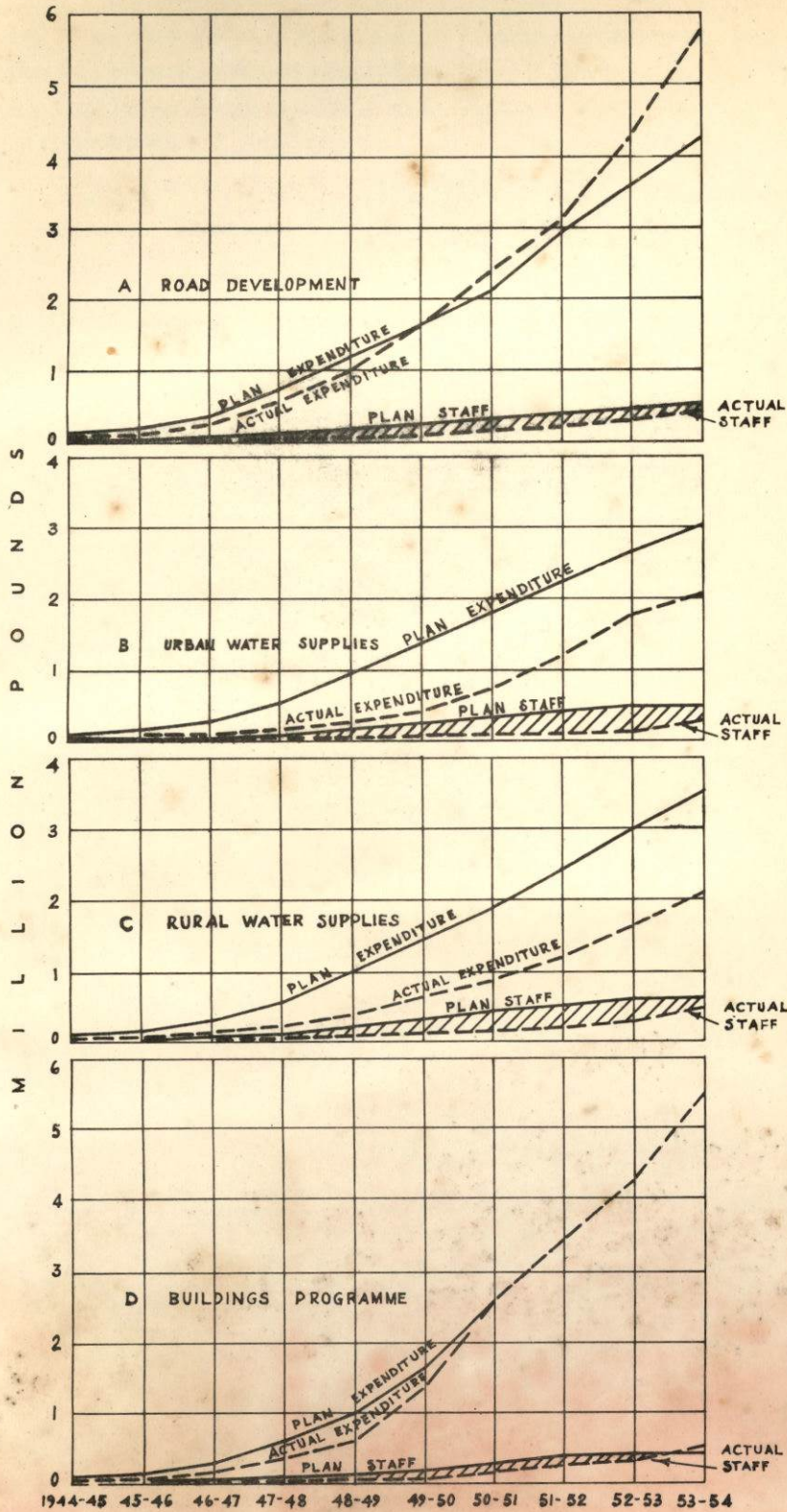


FIGURE 3
PROGRESS OF THE DEVELOPMENT PLAN



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