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Report No. 6483

PROJECT COMPLETION REPORT

TANZANIA

FOURTH HIGHWAY (MAINTENANCE) PROJECT

(CREDIT 507-TA)

November 7, 1986

Eastern and Southern Africa Regional Office
Projects Department
Transportation Division

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THE WORLD BANK
Washington DC 20433
U.S.A

Office of Director-General
Operations Evaluation

November 7, 1986

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on Tanzania Fourth Highway
(Maintenance) Project (Credit 507-TA)

Attached, for information, is a copy of a report entitled "Project Completion Report on Tanzania Fourth Highway (Maintenance) Project (Credit 507-TA) prepared by the Eastern and Southern Africa Regional Office. Under the modified system for project performance auditing, further evaluation of this project by the Operations Evaluation Department has not been made.

Yves Rovani

by Ram K. Chopra

Attachment

TANZANIA

CREDIT 507-TA

PROJECT COMPLETION REPORT

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Highway Maintenance Project - Transport Network (IBRD 10949R)

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FOURTH HIGHWAY (MAINTENANCE) PROJECT

CREDIT 507-TA

PROJECT COMPLETION REPORT

PREFACE

This Project Completion Report (PCR) has been prepared for the Highway Maintenance Project in Tanzania for which the Credit 507-TA, in the amount of US\$10.2 million, was signed on August 21, 1974. The Credit became effective on November 20, 1974 and was closed on December 31, 1982. The total amount disbursed was US\$9.34 million and the remaining US\$0.86 million was cancelled. This is the fourth project in the highway subsector, which the Bank Group assisted in Tanzania, and together with the Fifth Highway Project of March 1979, addresses the country's needs in road maintenance.

The PCR was prepared by the Eastern and Southern Africa Projects Department, Transportation Division, on the basis of information contained in the Staff Appraisal Report, a review of Bank files including supervision and progress reports, and information collected on a mission during February 1983.

In accordance with the revised procedures for project performance audit reporting, this Project Completion Report was read by the Operations Evaluation Department (OED) but the project was not audited by OED staff. The draft report was sent to the Borrower for comments; however, none were received.

TANZANIA

FOURTH HIGHWAY (MAINTENANCE) PROJECT (CREDIT 507-TA)

PROJECT COMPLETION REPORT

BASIC DATA SHEET

KEY PROJECT DATA

<u>Item</u>	<u>Appraisal Estimate</u>	<u>Actual or Re-estimate</u>
Total Project Cost (US\$ million)	12.45	10.52
Overrun (%)	-	-16
Credit Amount (US\$ million)	10.2	10.2
Disbursed	-	9.343
Cancelled	-	0.857
Repaid to December 31, 1985	-	0.12
Outstanding to December 31, 1985	-	9.343
Project Completion Date	06/78	12/82
Proportion Completed by Expected Date (%)	100	51
Proportion Completed by Completion Date (%)	-	90
Proportion of Time Overrun (%)	-	100
Economic Rate of Return	22	Negative

Cumulative Estimates and Actual Disbursements

(US\$ million)

	<u>FY75</u>	<u>FY76</u>	<u>FY77</u>	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
(i) Estimate	0.5	2.2	6.5	9.7	10.2	-	-	-	-	-
(ii) Actual	-	0.4	2.3	4.9	6.43	7.83	8.47	8.67	9.17	9.34
(iii) Actual	-	18	35	51	63	77	83	83	90	92

as % of (i)

Date of Final Disbursement: December 29, 1983.

OTHER PROJECT DATA

<u>Item</u>	<u>Original Plan</u>	<u>Actual</u>
First Mention in Files or Timetable	-	02/17/72
Government's Application	-	09/06/73
Appraisal	2/73	12/73
Negotiations Completed	-	06/28/74
Board Approval	-	08/06/74
Credit Agreement Date	-	08/21/74
Effectiveness Date	-	11/20/74
Closing Date	6/30/79	12/31/82
Borrower	United Republic of Tanzania	
Executing Agency	Ministry of Communications and Works	
Fiscal Year of Borrower	July 1 - June 30	
Follow-on Project Name	Fifth Highway Project	
Credit Number	Cr. 876-TA	
Amount (US\$ million)	US\$20.5 million	
Credit Agreement Date	March 2, 1979	

BASIC DATA SHEET

MISSION DATA

<u>Mission</u>	<u>Month/ Year</u>	<u>No. of Weeks</u>	<u>No. of Persons</u>	<u>Staff Weeks</u>	<u>Date of Report</u>
Identification	03/72	0.4	2	0.8	04/25/72
Preparation	06/72	0.4	1	0.4	07/28/72
Preparation	11/72	0.4	1	0.4	12/28/72
Preparation	02/73	0.9	1	0.9	03/21/73
Preparation	08/73	0.6	1	0.6	10/12/73
Appraisal	12/73	2.5	4	10.0	01/08/74
Post-Appraisal	05/74	0.2	1	0.2	07/19/74

Total: Seven missions totalling 13.3 staff weeks within 26 months.

Supervision	10/74	0.4	2	0.8	11/27/74
Supervision	04/75	0.3	1	0.3	06/16/75
Supervision	09/75	0.6	1	0.6	10/17/75
Supervision	11/75	0.6	1	0.6	01/14/76
Supervision	03/76	0.5	2	1.0	05/28/76
Supervision	03/77	2.5	1	2.5	05/10/77
Supervision	10/77	2.5	2	5.0	12/08/77
Supervision	01/78	0.5	1	0.5	03/09/78
Supervision	10/78	0.6	3	1.8	12/15/78
Supervision	03/79	0.5	2	1.0	04/09/79
Supervision	06/79	0.5	1	0.5	06/26/79
Supervision	08/79	0.5	2	1.0	10/15/79
Recasting	12/79	4.0	1	4.0]	02/01/80
of Project		1.3	1	1.3]	
Supervision	03/80	0.7	3	2.1	04/22/80
Supervision	06/80	1.0	1	1.0	07/15/80
Supervision	11/80	0.4	2	0.8	01/23/81
Supervision	09/81	0.4	1	0.4	11/11/81
Supervision	03/82	0.5	1	0.5	05/19/82

Total: 18 missions totalling 25.7 staff weeks within 7½ years.

CURRENCY EXCHANGE RATES

Name of Currency	Tanzania Shilling (TSh.)
Appraisal Year Average	US\$1 = TSh 7.14
Intervening Year Average (end 1978)	US\$1 = TSh 8.00
Completion Year Average (end 1982)	US\$1 = TSh 9.5

BASIC DATA SHEET

GLOSSARY OF ABBREVIATIONS

CIDA	- Canadian International Development Agency
COMWORKS	- Ministry of Communications and Works
DANIDA	- Danish International Development Agency
ICB	- International Competitive Bidding
PCR	- Project Completion Report
SAR	- Staff Appraisal Report
TRM	- Trunk Road Maintenance
USAID	- United States Agency for International Development

TANZANIA

FOURTH HIGHWAY (MAINTENANCE) PROJECT (CREDIT 507-TA)

PROJECT COMPLETION REPORT

Highlights

The Fourth Highway (Maintenance) Project changed the focus of Bank Group Lending in Tanzania from investments in highway construction to improvements in highway maintenance and institution building. The project constituted the first phase of an intended two-phase effort to establish a trunk road maintenance organization. The first phase covered about 3,300 km of primary roads in the southern half of the country and the second phase which was financed under the Fifth Highway Project (Credit 876-TA) covered about 5,100 km of primary roads in the northern half of the country.

Although the project failed to achieve its physical objectives, a trunk road maintenance organization is in place in the regions and although budget allocations for road maintenance were unsatisfactory during the project period, they have been stepped up since then to satisfactory levels. With the availability of more engineers trained under the Fifth Highway Project and gradual improvement in training of technicians and field personnel under the above project, accomplishment of maintenance works is improving in quantity as well as in quality.

The project was the outcome of a "Tanzania Highway Maintenance and Organization" study which was carried out in 1972 by consultants financed by the United States Agency for International Development. The Association assisted the Government in reviewing the reports at various stages of the study. The Government completed project preparation with the assistance of an advisor financed by the Canadian International Development Agency and a Government request for financing the project was made to the Association in September 1973. The Association appraisal took place soon afterwards in December (Paras 2.03 - 2.05).

Although the Credit Agreement became effective in November 1974, the technical assistance financed under the project was not in place until late 1977. Initially, COMWORKS was not convinced of the need for technical assistance and considered its cost as too high for the project despite the fact that two-thirds of the engineering and technicians posts were vacant. Further delay in securing technical assistance services occurred from unsuccessful attempts to obtain the services through bilateral aid. COMWORKS also did not succeed in negotiations with a consulting firm to provide individual experts as opposed to a team of experts proposed by the firm. A second firm was then contacted but negotiations were not concluded until late 1976 (Paras 3.01 - 3.03).

By November 1979, the contract with consultants providing technical assistance and training services had expired and all technical assistance and training staff had left the country. COMWORKS was not fully committed to hiring consultants for the technical assistance services, and poor housing and working conditions resulted in the majority of the staff remaining only for short periods in the country. Counterparts were appointed late and most of them were found to be not suitable. Hence, performance of technical assistance and training staff was not satisfactory (Para 3.07).

The procurement of equipment and spare parts was slow as a result of non-fulfilment by COMWORKS of Bank procurement procedures particularly over the requirement for prior review by the Association of bidding procedures and documentation for International Competitive Bidding. When procurement was completed in 1978, war broke out between Tanzania and Uganda and the Government diverted the heavy equipment to military operations (Paras 3.11 - 3.14 & 3.21).

The project showed no progress and COMWORKS proposed a recasting of the project which was eventually approved by the Association in 1981. The final agreement with the Association called for the procurement of spare parts, few pieces of equipment and technical assistance. COMWORKS undertook to execute a highway maintenance program consisting of resealing 214 km, regravelling 186 km, pavement repairs for 640 km, and routine maintenance of a network which had expanded from 3,300 km at the beginning of project in 1974 to 4,900 km in 1979 with the incorporation of more roads into the network to be maintained by COMWORKS. The project was closed on December 31, 1982 with US\$0.86 million of the original Credit of US\$10.2 million cancelled. There was little improvement in routine maintenance and standards of resealing and regravelling. The project had a negative economic rate of return (Paras 3.23 - 3.26 & 5.01).

A number of lessons have been learned from the project. First, successful highway maintenance depends mainly on the quality of local management and availability of requisite number of trained field personnel. Second, the executing agency should be fully committed to employing technical assistance staff, where needed, and have the ability to administer and monitor the contracts for such services. Third, technical assistance should play an advisory role only if there are suitable counterparts. Fourth, the project demonstrated the need to develop the local contracting industry to increasingly participate in road maintenance and rehabilitation works as an alternative to force account for all works. The lessons learned from the project have been extremely valuable and together with the experience on the recently completed Fifth Highway Project have guided the design of the Sixth Highway (Rehabilitation) Project (Credit 1688-TA) (Paras 6.06 and 6.07).

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PROJECT COMPLETION REPORT

FOURTH HIGHWAY (MAINTENANCE) PROJECT (CREDIT 507-TA)

I. INTRODUCTION

1.01 Tanzania is a large country (945,000 km²) with a widely dispersed population (19.8 million) and sharply contrasting terrain (0 - 19,340 ft above sea level). This combination makes the transport system a complex one with transport movements over long distances an important characteristic. Additional demands by its land locked neighbours for transit through the country contribute to making the maintenance and operation of the transport system more difficult. Overall, roads are the predominant transport mode with the rail systems catering mainly to import/export traffic.

1.02 The Bank Group involvement in the transport sector in Tanzania began in 1955 when a loan was made to the East African Community (EAC) for a railway project. Assistance in the highways subsector did not occur until 1964, two years after the country's independence. Bank Group assistance was initially directed towards investment in new roads. In the late sixties with the departure of expatriate engineers and later, the indigenous engineers of Asian origin, the deterioration of the road network through neglect of road maintenance became very evident. Bank Group strategy, then, shifted towards institution building, training, and assistance to strengthen the road maintenance organization. In all, the Bank Group has financed six projects in the highway sub-sector, totalling US\$106.7 million, including a Trucking Industry Rehabilitation and Improvement Project (Credit 743-TA, US\$15.0 million, 1977).

1.03 In August 1974, soon after the Credit Agreement for the Fourth Highway (Maintenance) Project was signed, the executing agency, Ministry of Communications and Works, was split into two separate ministries, the Ministry of Communications and Transport and the Ministry of Works. The latter ministry became the new executing agency. In July 1984, the two combined again to form a single Ministry of Communications and Works (COMWORKS). Hereafter, reference is made only to COMWORKS.

1.04 The COMWORKS is headquartered in Dar-es-Salaam, the capital. COMWORKS is primarily responsible for the administration of the trunk road system. It has divided the country into 20 regions for trunk road maintenance (TRM). The project aimed at establishing TRM organization in 10 regions located in the southern half of the country and improving road maintenance operations. The 10 regions in the northern half of the country are covered by a similar project, the Fifth Highway Project (Credit 876-TA, US\$20.5 million, 1979) which closed on December 31, 1985.

1.05 The Fourth Highway (Maintenance) Project (Credit 507-TA, US\$10.2 million, 1974), the subject of this Project Completion Report (PCR), included the maintenance/rehabilitation of about 3,300 km of primary roads, the construction and improvement of road maintenance camps, workshops and offices, the procurement of workshop equipment and tools and equipment, spare parts and materials for road maintenance, the training of road maintenance personnel and technical assistance to COMWORKS. The financing of the project was shared between the Government (20%) and the Association (80%). There were no cofinanciers.

1.06 The sources of information on which the PCR was based are listed below:

1. Bank Project Files - Fourth Highway (Maintenance) Project (Credit 507-TA).
2. Appraisal Report and Credit Agreement.
3. Consultants Study on Tanzania Highway Maintenance and Organization - Inception Report of March 16, 1972; Draft Final Report (Summary) of March 1972; and Final Report (Vol. I, III, and III) of August 1, 1972.
4. TRM/COMWORKS: Proposals for Tanzania Trunk and Territorial Road Maintenance, July 1973.
5. GOT/Consultants: Contract for Trucking Industry Study, April 1975.
6. Consultants: Final Report on the Trucking Industry Study, May and September 1976.
7. GOT/Consultants: Contract on Technical Assistance and Training for Highway Maintenance, September 1976.
8. Technical Assistance Consultants and MOW Quarterly Reports.
9. MOW: Local Construction Industry Study (1977).
10. Staff Appraisal Report (1978), Tanzania Fifth Highway Project.
11. University of Dar-es-Salaam: Vehicle Load Regulation Study for the Tanzania - Zambia Highway, June 1979.
12. Consultants: Draft Final Report on Technical Assistance and Training for Highway Maintenance, February 1980.
13. MOW/Consultants: Report on the Recasting of the IDA Fourth Highway Project, November 1980.
14. Project Performance Audit Report No. 4030 on Tanzania - Second Highway Project (Loan 586-TA/Credit 142-TA) of June 30, 1982.

15. Project Performance Audit Report No. 4031 on Tanzania - Third Highway Project (Credit 265-TA/Loan 586-TA) of June 30, 1982.
16. Tanzania - Transport Sector Memorandum, Vol. I and II, May 17, 1982.
17. The World Bank Report No. 5085 on Institutional Development in Africa: A Review of World Bank Project Experience, Vol. I and II, May 17, 1984.
18. The World Bank Report No. 5019-TA: Country Economic Memorandum - Tanzania - August 10, 1984.

II. PROJECT IDENTIFICATION, PREPARATION, AND APPRAISAL

Origin

2.01 In 1970, the Government became concerned about deterioration of the primary road network. It recognized the need to improve its road maintenance capability which had suffered through loss of senior and experienced staff and inadequate funding. Faced with the problem of also having to maintain about 17,000 kms of rural roads previously maintained by the local authorities, the Government sought assistance from the United States Agency for International Development (USAID) to finance a Highway Maintenance and Organization Study.

2.02 The study made recommendations for (i) the improvement of the road maintenance organization, (ii) the reorganization of COMWORKS to take over and maintain the regional and district roads in addition to the trunk road system, and (iii) a five-year program (1972-76) for road rehabilitation and maintenance. The Association assisted the Government by reviewing and commenting on the study reports emphasizing particularly the institutional aspects. The study was completed satisfactorily in early 1972.

Preparation

2.03 Based on the findings of the USAID financed study, COMWORKS began preparation of a trunk road rehabilitation and maintenance project for financing by the Association. Progress was slow because of the lack of experienced staff and lack of interest shown by senior COMWORKS officials in an Association financed road maintenance project. Most of the staff were new and inexperienced and were interested more in design and construction of new works rather than in road maintenance. In order not to delay project preparation and at the initiative of the Association, an advisor, financed by the Canadian International Development Agency (CIDA), was appointed to COMWORKS to assist the ministry.

2.04 During the course of project preparation, the Government began implementing a policy of decentralization of government administration and a major reorganization of COMWORKS was taking place to decentralize its activities. This was not consistent with the findings of the USAID financed study which recommended the consolidation of authority in COMWORKS over all roads in the country including the regional and district roads. In the end, however, it was agreed with the Association to retain administration of the trunk road system including responsibility for execution of the trunk road maintenance in COMWORKS but responsibility for regional, district, and other roads passed to the regional and district governments.

2.05 A formal application for the Credit was sent by the Government on September 6, 1973. The Government's application consisted of proposals for a trunk road maintenance project including the development of a capable trunk road maintenance organization in COMWORKS. The Government's approach was considered by the Association as basically sound and a sufficient basis for an appraisal which took place in December 1973.

Appraisal

2.06 The project as prepared by COMWORKS was found by the appraisal mission to be too large. It was agreed with the Government to reduce the scope of the project because of: (i) the availability of only about US\$8.0 million of credit funds for the project, (ii) the shortage of adequately trained staff in COMWORKS to implement the project, and (iii) the need to test road maintenance methods suited to Tanzanian conditions on a reduced scale before applying them to the whole country.

2.07 The Government agreed to carry out its trunk road maintenance program in two stages. The first stage to be financed under the project would cover about 3,300 kms of primary roads located in the southern half of the country out of about 7,200 kms in the entire country. The balance was to be covered under a subsequent project - the Fifth Highway Project.

2.08 Given the shortage of experienced staff, project preparation was satisfactory. Many details were provided after the appraisal mission returned to headquarters and they were in respect to: (i) plans and specifications of road maintenance camps; (ii) costs of tools and mobile workshop equipment; (iii) cost of training aids; (iv) updated traffic counts for the roads to be rehabilitated under the project; and (v) inventory and costs of workshops, tools, and equipment.

2.09 From the outset, the appraisal mission was concerned about the availability of qualified and experienced manpower in COMWORKS and its ability to execute the project satisfactorily. Only 16 of the 63 engineering posts were filled at that time and two-thirds of the approximately 180 technician positions were vacant. How to meet this shortage of manpower was the main issue which was to shadow the implementation of the project and its outcome.

2.10 Although COMWORKS project proposal included a request for 21 expatriates to fill staff positions, the project component became a subject of repeated controversy between the Association and COMWORKS. As early as March 1973, the minister had indicated that he was opposed to employment of consulting firms and intended to recruit individual experts under contract with the Government. The Association mission in the field at that time suggested considering the issue at project appraisal.

2.11 COMWORKS was aiming to give Tanzanian staff the opportunity to learn on the job at a pace it was comfortable with. It intended, therefore, to hire experts as individual advisors who could be integrated easily into the ministry compared to a consulting firm. It also hoped to avoid the cost of overheads and profits that would be charged to the Government by a consulting firm. Before independence and several years afterwards Government expatriate staff were recruited individually for appointment to the ministry and Government had the machinery and the experience in administering expatriate staff.

2.12 Unfortunately, the appraisal mission did not raise this as an issue in its issues paper and Association management accepted without discussion the mission's recommendation to recruit the expatriate technical assistance staff as a team. This meant that the Government would have to contract with a firm to provide the technical assistance staff. This was a subject of disagreement frequently during project implementation.

2.13 There was also a genuine feeling in the Government, that senior executive posts of an independent nation should not be seen to be managed by expatriate staff. This led to the proposal to appoint all experts as advisors although it was apparent that there were few suitably qualified counterparts and that in reality, the advisors would be called upon to function in executive positions. This resulted in continuing misunderstanding among the advisors as to their precise role.

2.14 In assessing the institutional capability of COMWORKS, the appraisal mission concluded that the shortage of qualified staff would be greatly alleviated within 5 to 10 years if COMWORKS were able to attract students graduating in engineering in the mid-seventies. This conclusion greatly underestimated the demand in the country for engineers and the shortage has persisted to the present day.

2.15 The project aimed at the execution by force account of all road maintenance works including periodic and rehabilitation works. Although the appraisal mission gave a bleak picture of the capacity of the local contracting industry to execute roadworks, it did not consider including provision for strengthening and developing the industry and did not consider this as a viable alternative to force account. The overriding factor was an express Government policy of favoring the expansion of Government involvement in all sectors including the construction sector.

Targets and Goals

2.16 The ultimate goal was to establish and operate an organization to plan, manage, and carry out the maintenance of the trunk roads (primary) in the country to acceptable standards. It was to be done in two phases: the first phase covering the southern half of the country and second phase, the northern half. The project represents the first phase.

2.17 The successive project targets were to be as follows:

- i) to divest the regional government of responsibility for trunk road maintenance (TRM) and to pass responsibility to COMWORKS;
- ii) to establish a TRM organization in each of the 10 regions covered by the project headed by a Resident Engineer;
- iii) to furnish each Resident Engineer with offices, camps, equipment maintenance workshops, equipment and vehicles and spare parts and materials to enable him to execute a road maintenance and rehabilitation program.

2.18 The main project objective was to prevent the deterioration of the trunk road network and protect the investments made in it with a view to eliminating transport as a constraint to rapid economic growth. In addition to the main objective, the project also included a study of the road transport industry in Tanzania. Thus, as early as 1973, the need became apparent to direct attention also to the road users.

Project Description

2.19 The project, as finally agreed between the Government and Association, consisted of:

- a) the first stage of a road maintenance program, to be implemented over a four-year period and to include:
 - i) the maintenance and, where necessary, rehabilitation of about 3,300 kms of primary roads;
 - ii) the reconstruction and/or improvement of road maintenance camps, workshops, and offices;
 - iii) the purchase of road maintenance and workshop equipment, vehicles, spare parts, tools and materials;
 - iv) the training of maintenance personnel; and
 - v) technical assistance to COMWORKS; and
- b) a study of the road transport industry for the purpose of developing recommendations as to pricing and licensing policies and other regulations concerning the industry.

2.20 The project was expected to be completed by June 30, 1978.

III. PROJECT IMPLEMENTATION AND COST

Start-Up

3.01 The project started slowly. Although funds were allocated in the Credit to finance technical assistance, the Government first made unsuccessful attempts to obtain technical assistance staff through bilateral aid. In October 1974, at the request of COMWORKS, the Association recommended a consulting firm which was then invited by COMWORKS to submit a proposal for the technical assistance services. The firm's proposal was unacceptable to COMWORKS since the firm offered experts as a team rather than as individuals.

3.02 The Association now shifted from the position it held during project preparation and appraisal and agreed (i) to amending the role of the consultants to that of a staff recruiting agency and (ii) for the recruited experts to work as individual staff of COMWORKS. But negotiations with the consultants, on this issue as well as on the costs issue, became protracted and yielded no result one year after the consultants submitted their proposal and 14 months after signing of the Credit Agreement. A Side Letter to the Credit Agreement had stipulated that three specialists (a maintenance management engineer, a training coordinator, and an equipment specialist) would assume duties by January 31, 1975, four months after signing of the Credit Agreement.

3.03 Again, at COMWORKS request, the Association recommended another firm as suitable for recruiting the technical assistance experts. In September 1976, COMWORKS succeeded in signing a contract with this firm for the recruitment of all experts: an engineering and administration group of fifteen specialists to relieve the staff shortage and a training group of six training specialists to develop training courses and on-the-job training programs. The contract included various administrative costs but excluded specific mention of overheads.

3.04 The contract price of US\$2.57 million for 634 man-months was reasonable. The fifteen specialists in the engineering and administration group were to fill managerial positions in COMWORKS. The group consisted of 1 Maintenance Management Engineer, 1 Maintenance Administrator, 1 Equipment and Spare Parts Specialist, 2 Area Maintenance Supervisors, 7 Equipment Service and Maintenance Managers, 1 Special Projects Supervisor, 1 Premix Superintendent, and 1 Quarry and Rock Crushing Superintendent. The training group consisted of 1 Training Coordinator and 5 instructors.

Technical Assistance

3.05 The arrival of the technical assistance specialists was spread out in three phases. The first batch of four was scheduled to arrive not later than three months following the date of signature of the contract (September 1, 1976), the second batch of fourteen not later than 8 months, and the third batch of three not later than 10 months. The first batch of

specialists arrived close to contract schedule. Only four out of the fourteen in the second batch arrived as scheduled. By the end of the third phase, four specialists had still not arrived. In two years, altogether 10 specialists had left the country either voluntarily or dismissed by the Government. Others arrived to take their places. Still others continued to leave and the picture as regards technical assistance was one of comings and goings. At no time were all positions filled. In June 1979, COMWORKS stopped further recruitment and some posts remained unfilled.

3.06 When the consultants' contract for technical assistance expired in November 1979, only three key specialists were in place. The rest had left mainly because of poor living and working conditions. Most of the specialists had families but, in early 1978, of the eight based in Dar-es-Salaam only one was provided with a house which was found by the consultant's own efforts although the Government was required under the contract to provide housing for technical assistance staff. Later, two more houses were made available in Dar-es-Salaam.

3.07 Working conditions were difficult because of lack of office space, insufficient transport and poor communications between headquarters and the regions. Slow progress with equipment procurement and building of road camps, workshops and stores and lack of spares and service and repair facilities and fuel contributed to the frustration faced by the expatriate staff. Above all, they had difficulty in managing local staff. Counterparts were also not provided until late 1977 and when they were provided, they were found mostly to be not suitably qualified and they lacked the aptitude to benefit from the training provided by the technical assistance staff. Relations with counterparts were not satisfactory and many of the specialists were confused as to their precise role when counterparts were appointed. The counterparts expected the expatriate specialists to work as advisors although the specialists were to fill managerial positions under their contract with the Government.

3.08 The Association supervision mission in December 1979, in its evaluation of the technical assistance services, found that there was little physical evidence of their effectiveness in improving road maintenance. No inventory of the trunk roads had been compiled and no procedures had been instituted for regular road inspections. Consequently, there was little evidence of any realistic planning for routine and periodic road maintenance. The TRM Organization had been established but there was no systematic execution of road maintenance works. The few scattered and uncoordinated works that were carried out were of poor quality. None of the ten regions covered by the project submitted progress reports.

Formal Training

3.09 The Morogoro Training School was established in 1974 to train road maintenance field personnel - road inspectors, foremen, mechanics, equipment operators, and drivers. The project objective was to support the school - to develop courses of instruction, prepare curricula and help COMWORKS staff to teach the courses and run the school. Instead, the

consultants carried out separately their own program for the TRM staff which was not integrated into the overall program of the school. Thus, when the consultants left, the school was unable to sustain the additional courses started by the consultants. Local instructors trained under the project were not offered employment on completion of their training.

3.10 The courses themselves were poorly attended. COMWORKS staff were reluctant to attend the courses because their salaries were cut by 35% (later reduced to 10%) to pay for board and lodging at the school. As the training courses were conducted in English, many of COMWORKS staff, who were Swahili speaking, failed to benefit to the planned extent. When the consultants contract came to an end in late 1979, a total of 316 COMWORKS personnel had been trained in nine courses. Only 56 had been trained in road maintenance. Most of the training was directed at workshop and auto mechanics training. Training targets were not set at appraisal.

Procurement

3.11 The project implementation schedule called for early steps to be taken for procurement of equipment, spare parts, and tools. COMWORKS was assisted by an expatriate financed by CIDA to prepare the bidding documents which were submitted to the Bank for approval in February 1975. Substantial changes had to be made to the documents before the first round of bids could be invited in August 1975. The bidding was scheduled in three phases. The first round of bids was opened on October 31, 1975.

3.12 However, there was delay in bid evaluation by COMWORKS and it was not until about 4 months later that recommendations for contract awards were submitted to the Association for approval. The Association agreed with all COMWORKS recommendations except for the contract award regarding 2 bull dozers and 8 front-end loaders which was made to the second lowest evaluated bidder. These items of equipment were of a popular make common at that time in the country and were regarded by COMWORKS as more reliable than those of the lowest bidder. COMWORKS decided to go ahead without the Association's approval and financed the disputed items of equipment from its own resources. The Association considered cancelling from the Credit the cost of the above equipment amounting to about US\$500,000 but eventually it did not.

3.13 The second round of bids for equipment and spare parts was invited in late 1976. Bidding documents and advertizing procedures were not sent to the Association for prior review. Local competitive bidding was applied to purchase of bitumen in excess of US\$50,000 when the credit agreement stipulated ICB in this case. At the same time, contracts signed based on the first round of bids showed quantities and prices different from the bids. The Association at this point felt that COMWORKS either did not understand Association's procurement procedures or chose to ignore them.

3.14 In the event, the Association reviewed the bidding documents for the second round of bidding ex post and was satisfied. However, bid evaluation by COMWORKS again took over five months. On this occasion, the

Association approved the COMWORKS recommendations without comment. In retrospect, COMWORKS understandably proceeded with bidding for the second batch of equipment without reference to the Association as COMWORKS was following procedures previously approved by the Association for the first batch of equipment. Although the Association was eventually satisfied with the documents and procedures adopted, yet it demanded prior review of all bidding documents before the third round of bidding in late 1977. The disagreement over quantities and contract prices in respect of the first round of bidding were also resolved to the satisfaction of the Association. Table 1 provides details of the list of equipment procured under the project.

3.15 With regard to civil works for the construction of road camps, offices and workshops, although the Credit Agreement stipulated execution by contract unless it was not found feasible, COMWORKS carried out all works by force account with the approval of the Association. There is no evidence of a basis for the Association's waiver of the requirement to execute the works by contract. However, works did not commence until late 1976, over two years after the Credit was signed and none had been completed three years later.

Road Maintenance and Rehabilitation Works

3.16 The project goal was to establish an organization for the maintenance of 3,300 km of primary roads. Many of the roads had deteriorated and the project provided for the rehabilitation of these roads in order to restore them to a maintainable condition. Practically, all the gravel and earth roads, about half the total road network, required some rehabilitation. Most of the paved roads were adequate at the time of appraisal.

3.17 Twenty-three road camps and 7 workshops were to be built in the ten regions covered by the project. Thirty section crews for routine maintenance and six specialized crews for periodic maintenance and road rehabilitation works were to be organized and equipped, in stages, to execute the whole program.

3.18 By late 1979, COMWORKS had constructed only 9 camps out of the 23 scheduled. There were shortages in supply of materials and fuel and insufficient funds in COMWORKS budget to construct the camps. Only 10 crews for routine and 3 crews for periodic maintenance had been established, less than 50% planned for establishment. There were only sporadic attempts at execution of road maintenance operations and rehabilitation works. The quality was poor and, overall, there was little impact on the continuing deterioration of the primary road network.

3.19 Much of the poor performance in the field was due to the lack of adequately trained foremen and inspectors and shortage of experienced engineers. Above all, the organization for the execution of the whole program was unsatisfactory.

3.20 Although the program was executed by the TRM organization headed by a Resident Engineer, an employee of COMWORKS, the TRM Resident Engineer reported to the Regional Engineer. Responsibility for supervision of the TRM Resident Engineer was delegated by COMWORKS to the Regional Engineer. The Regional Engineer was an officer of the Regional Government and as such was also responsible for the administration of all the secondary and feeder roads in the region, for which responsibility had passed to the Regional Government under the Government's decentralization policy together with responsibility for building works and water supply.

3.21 The Government's decentralization policy had the effect of strengthening the local administrations and the Regional Engineer took his orders from the Regional Development Director. Thus, his time was divided between the demands of the Regional Government and COMWORKS with the Regional Government generally having priority when there were conflicting demands. As a result, resources generated by the project such as skilled manpower and fuel were diverted to meet the needs of the Regional Government. The war with Uganda in 1978/79 made matters worse when heavy equipment and trucks were diverted for use in constructing the airfield at Mwanza and for other military purposes.

3.22 There was underutilization of equipment and low availability rates as well as frequent breakdowns caused by poorly trained operators and repair and servicing of equipment and vehicles were unsatisfactory. Inadequate provisions were made to maintain a regular supply of spare parts; low priority was given to the execution of routine road maintenance tasks for which hand tools were generally adequate. Thus, the deterioration of the primary road network continued despite the inputs provided by the project.

The Recasting of the Project

3.23 In late 1978, it became evident that, even after technical assistance staff had been in the ministry for nearly two years and most of the equipment had been delivered, there was little improvement in road maintenance. During this period, the Government was preparing the Fifth Highway Project which aimed at implementing the second stage of establishing a trunk road maintenance capability in the northern half of the country.

3.24 At negotiations for the Fifth Highway Project in December 1978, the Government and Association agreed that COMWORKS would prepare a proposal for recasting of the fourth project in the light of lessons learned at that time and already incorporated in the fifth project. The Fifth Highway Project differed in the following respects:

- i) the TRM organization would report directly to COMWORKS rather than to the Regional Engineer as was the case under the Fourth Highway Project;
- ii) the role of technical assistance staff would be clearly defined; and
- iii) the road rehabilitation program identified the road sections to be included in the project.

3.25 The project continued to show no perceptible progress for the next 12 months. COMWORKS had not submitted its proposal to recast the project when, following a supervision in August 1979, the Association financed a consultant to visit the country to assist COMWORKS in its efforts to recast the project. The objective was to make the project "organizationally and operationally consistent with the Fifth Highway Project" and prepare a program to apply the balance of the credit proceeds effectively.

3.26 In May 1980, COMWORKS officials were invited by the Association to Washington to discuss the problems facing the project. The basis of the discussions was the report by the Association-financed consultant who visited the country in November/December 1979. Following the meetings in Washington, COMWORKS submitted, in January 1981, a proposal for recasting the project, which was acceptable to the Association. The proposal was to reallocate the balance of the credit proceeds (US\$1.5 million) and to establish a road maintenance program (January 1981 - June 1983) comprising (i) the resealing of 214 km of paved roads, (ii) regravelling of 186 km of gravel roads, (iii) patching of 1,400 km of paved roads, (iv) grading of 640 km of gravel roads, and (v) routine maintenance of about 4,000 km. To implement the program, the Association approved the procurement of additional items of equipment (about US\$340,000), spare parts, (US\$960,000), and technical assistance (about US\$240,000) for a total of about US\$1,540,000. However, there was little improvement in project performance and the project was closed on December 31, 1982 with US\$857,000 cancelled.

Study of Road Transport Industry

3.27 The contract for consulting services to carry out the study was signed in April 1975. Unlike the case of selection of consultants for technical assistance services, there was little delay in the appointment of consultants for the road transport industry study. Only one consulting firm was invited to submit proposals.

3.28 The inception report was delivered on time and a draft final report was produced in December 1975, about two months behind contract schedule. Both reports drew comments from the Association and COMWORKS. The Association felt that there was no comprehensive analysis of the role of trucking in Tanzania, the constraints facing the sector and review of transport policy and investment options to alleviate these constraints. Much of the criticism by the Association and COMWORKS went unheeded in the final report which was revised twice in May and September 1976. The study identified various weaknesses and problems but was not very successful in analyzing them and developing an action program to remedy them.

Implementation Schedule

3.29 A comparison between the original and actual implementation schedule is shown in Table 2. Project implementation was three to four years behind schedule mainly due to the: (i) time taken for the selection of technical assistance specialists; and (ii) procurement disputes with the Association.

3.30 The project was expected to organize and equip 30 routine maintenance and 6 specialized crews. At the close of the project on December 31, 1982, the division of crews according to function and task had disappeared and only 12 crews were operating in all; six were carrying out patching works on paved roads and 6 regrading gravel roads. There was no other work being undertaken in the project area.

3.31 In retrospect, it is clear that the original implementation schedule was unrealistic. However, even when the inputs were in place, progress in the road maintenance and rehabilitation program continued to be negligible. The situation at the close of the project was no better than at commencement.

Reporting

3.32 The consultants responsible for the technical assistance and the road transport industry study submitted their reports in accordance with their contracts. There was no requirement in the Credit Agreement for reporting by the Government. However, COMWORKS at the request of the Association, prepared progress reports at quarterly intervals. The first report was submitted to the Association in August 1975 for the quarter ending July 31, 1975. The reports were satisfactory.

Performance of Consultants

(a) Technical Assistance

3.33 The consultants providing the technical assistance services were employed by COMWORKS from September 1976 to November 1979. Altogether 21 specialists were to be appointed for an average of 2 1/2 years to fill a variety of positions in COMWORKS. However, the maximum number of positions filled at any one time was 16 and the average period of stay in Tanzania was approximately 18 months. There were several replacements of technical assistance staff during the contract period. Four remained in Tanzania less than one year and 9 less than 15 months.

3.34 The large turnover of technical assistance staff was mainly due to the lack of suitable housing and evacuations for medical reasons. To a lesser extent, the frustrations at work were a contributing factor. Except for the six instructors at the Morogoro Training School, the majority of the staff lived in hotels. There were only three houses available in Dar-es-Salaam and those working in Mbeya, Songea, and Tanga Regions were mostly housed in the local hotels. Most of the housing offered by COMWORKS were in need of rehabilitation. There were 13 evacuations from the country for medical reasons including 6 by family members.

3.35 The consultants faced numerous constraints in the execution of their duties. Office facilities were inadequate, transportation was not always available, there were delays in the assignment of counterparts, particularly at the Morogoro Training School, spare parts and materials were in short supply, and equipment was diverted to the army during the Ugandan war.

3.36 In summary, work of the consultants was seriously hampered and they failed to achieve their contract objectives.

(b) Road Transport Industry Study

3.37 The contract for the study called for a large scope of activities on the part of the consultants within a relatively short time. Reliable data were difficult to obtain and in many instances non existent. The consultants were generally satisfactory in identifying the problems facing the industry but failed to analyze satisfactorily the issues, recommend appropriate measures to resolve these issues and develop a program to rehabilitate and strengthen the industry.

Project Costs

3.38 A comparison of the actual and estimated projected costs is shown in Table 3. The project costs which reflect only the inputs financed under the project are close to the estimated costs. While the Government's contribution to support the project's local costs was satisfactory, its allocations to the road maintenance budget were seriously cut during the project period. Expenditures on routine maintenance dropped from TShs 37.7 million in 1980/81 to TShs 22.5 million in 1981/82. Although expenditures rose slightly to TShs 24.9 million in 1982/83, it was obvious that government was not as supportive of the project as it should have been.

IV. INSTITUTIONAL PERFORMANCE AND DEVELOPMENT

4.01 At project appraisal, the Association was concerned about two institutional problems. First, in line with the Government's decentralization policy, the regional governments had taken over responsibility for all roads, but following agreement with the Association, responsibility for the primary or trunk roads was retained by COMWORKS. However, while planning, budgeting and financial controls were exercised by COMWORKS, the responsibility for supervision of the execution of road maintenance tasks was delegated by COMWORKS to the regional governments. Second, there was a serious shortage of staff at all levels, senior staff were inexperienced and technicians and field personnel were poorly trained.

4.02 With regard to the first problem, during negotiations the Government had agreed to discuss whether any adjustments in the institutional arrangements might be required when implementing the project. It was decided, when recasting the project in 1981, that the TRM Organization in the regions should be taken out of the control of the regional government as proposed for the Fifth Highway Project. This did not prove to be entirely satisfactory as the Resident Engineers heading the TRMs were unqualified and were recruited from the badly trained ranks of technicians. The Regional Engineers of the Regional Governments, on the other hand, were mostly qualified engineers.

4.03 With regard to the second problem, the project dealt with it only partially by implementing a training program for field personnel at the Morogoro Training School. In the Fifth Highway Project, a program for the training of about 100 engineers in universities in India was successful and in the proposed Sixth Highway (Rehabilitation) Project, the Government would institute a Highway Technician Course at the Dar-es-Salaam Technical College. In retrospect, many of these efforts should have been initiated earlier. The experience and management capability of senior engineers continue to be a problem.

4.04 It was not realized at appraisal of the project that COMWORKS would not be able to provide suitably qualified counterparts to technical assistance staff financed under the project. The assignment of counterparts did not begin until late 1977 (3 years after the credit had been signed). Only 3 counterparts were assigned at that time compared to 21 expatriate technical assistance specialists to be financed under the project. Eight counterparts took up their duties in May 1978. At no time did the number of counterparts exceed 12. The Equipment Services Manager counterparts were all unsatisfactory and were reassigned. The others were also not qualified to benefit fully from the technical assistance.

4.05 The shortage of engineers necessitated a heavy reliance on expatriates. The Government recruited expatriate staff individually, either directly or under arrangements with bilateral aid agencies. It was reluctant to accept staff from consulting firms. A major problem was that Government did not plan ahead to make timely replacements for staff when

their contracts expired. Many did not renew their contracts because of unfavorable living and working conditions. The lack of suitable housing was a critical factor. Even the staff provided under the project by a consulting firm were not willing to extend their stay in the country.

4.06 By 1979, the results achieved by the project disappointed both Government and Association. From the beginning there was a perception that the Association was attempting to provide jobs for consulting firms by introducing a large contingent of technical assistance staff. Senior officials had shown little interest in a road maintenance project. The Association refused to approve procurement that had been carried out without prior review of bid documents and procedures. The delays that followed and the exchange of telexes evidently upset COMWORKS staff and it contributed to the eventual reluctance of COMWORKS staff to meet with Association missions in the field.

4.07 The dialogue between the Association and COMWORKS was resumed when COMWORKS officials were invited to Washington to discuss a recasting of the project particularly in the light of institutional arrangements for the subsequent maintenance project, the Fifth Highway Project. Except for the separation of the Trunk Road Maintenance organization from the regional governments, the recasting merely aimed at reallocation of the balance of the credit proceeds. Opportunities were lost by the Government and Association to scale down the project area and test the new arrangements.

4.08 The project closing date was extended four times from June 30, 1978 to December 31, 1982. In April 1980, an Association mission reported that trunk road maintenance in the project area was "little if any better than it was in 1974", over 6 years after the credit was signed.

V. ECONOMIC RE-EVALUATION

5.01 Field observations by an Association mission immediately after the close of the project showed that there was no satisfactory planning of road maintenance in the project area, and that road maintenance operations were carried out on an ad hoc basis dependent upon availability of resources such as fuel, materials, equipment, transport, and spare parts. The organization and management of the regional trunk road maintenance organizations were not effective and there was little control and supervision over field crews and their activities. The few scattered road maintenance works carried out were of poor quality and road conditions reverted soon to their original deteriorated state. Thus, the savings in vehicle operating costs projected at the time of appraisal did not materialize. Therefore, the economic re-evaluation of the project shows a negative economic rate of return.

VI. CONCLUSIONS

Project Justification and Objectives

6.01 The project was a logical development after a decade of involvement in the highway sector to upgrade the highway network. The departure of expatriate staff after independence in 1962 and the exodus of indigenous staff of Asian origin in 1972 brought into focus the decline in road maintenance capability that had been going on for some time. Both COMWORKS and the Association realized the need to stem the deterioration of the highway network but while COMWORKS regarded the need for new construction and paving of the highway network as of equal priority the Association considered road maintenance as the higher priority and initiated the idea of a highway maintenance project with the objective of (i) establishing institutional arrangements for trunk road maintenance, (ii) training COMWORKS staff and field personnel, and (iii) implementing a road rehabilitation and maintenance program.

Project Content and Scheduling

6.02 Although the project covered only about 3,300 km, it was ambitious. The project area encompassed almost the whole of the southern half of the country where communications have always been difficult and suitable housing for expatriates scarce. For a pilot project, especially with obvious problems, the project area was too large. The project should have been tried out in one or two of the ten regions included in the project located closer to Dar-es-Salaam.

6.03 The desirability of limiting the project area becomes obvious when considering the complexity of the project. A highway maintenance project is necessarily a complex one requiring comprehensive attention to institutional arrangements and, in Tanzania, it is more so as the project had to cope with an environment of basic shortages - fuel, supplies, and skills.

Project Implementation

6.04 The project design aimed to: (i) implement a program of road maintenance and rehabilitation and (ii) build an institution to plan, organize, execute, and monitor road maintenance activities. However, it left out three important factors: (i) to define the road maintenance and rehabilitation program; (ii) provide for training of engineers and technicians other than artisans; and (iii) consider the alternative of carrying out road maintenance activities by contract rather than by force account.

6.05 The implementation capacity of COMWORKS was inadequate as it was finding it difficult to fill vacant positions in the ministry, particularly engineers, because of its reliance on bilateral aid for this purpose. Senior staff were, therefore, engaged in attending to the day-to-day

running of the ministry with not much time available to administer and attend to the requirements of the technical assistance staff financed by the project. However, the amount of technical assistance staff needed for project execution was correctly assessed.

Lessons Learned

6.06 The project clearly demonstrates that, for a technical assistance component to be effective in Tanzania, several important conditions should exist. First, the Government, particularly the executing agency, should be committed to employing technical assistance staff. Second, the role of technical assistance should be clearly defined e.g. if it is to be advisory or executive. An advisory role should not be agreed upon if suitably qualified local counterparts are not available. Third, the Government should have a satisfactory capability to administer the contracts for technical assistance services. Fourth, before technical assistance staff and their families arrive in the country, the Government should be satisfied that suitable housing, office facilities, and local transportation have been earmarked. Fifth, each technical assistance staff member should produce at the beginning of each half yearly period a detailed work program, satisfactory to the Government, in terms of actual tasks to be performed to achieve technical assistance objectives. Sixth, the Government should monitor performance based on the individual technical staff member's half yearly work program to see if it is justified to continue the technical assistance.

6.07 Most importantly, the point made by the project is whether it is possible at all to develop a full force account capability to execute road maintenance works. Experience on the Fifth Highway Project also shows that COMWORKS should limit its force account operations and that the alternative of giving out most of the road maintenance works to be executed by contract should be considered. Accordingly, in the proposed Sixth Highway (Rehabilitation) Project, provisions have been made for technical assistance and training for the development of the local contracting industry.

TANZANIA

Table 1

FOURTH HIGHWAY (MAINTENANCE) PROJECT (CREDIT 507-TA)

PROJECT COMPLETION REPORT

EQUIPMENT PROCUREMENT SCHEDULE
(Prior to Recasting of Project)

Item	No. Del'd	Date Rec'd	C.I.F. Price		Local Costs (T Sh)	Total Unit Price (T Sh)	Remarks
			Currency of Bid	T Sh Equip.			
<u>FIRST BID CALL</u>							
Pickups	57	May 77	Yen 814700.00	22119	6155	282740	-
Pippers	36	June 77	Yen 3133330.00	85312	23174	108466	Sixteen were taken by Army.
Concrete Mixer	2	June 73	T Sh -	-	-	-	-
Water Pump	17	June 77	\$ 775	6346	700	7046	-
Compressor 250 CFM	3	June 77	\$ 8,366.00	66501	12199	30700	One was taken by Army.
Water Tank	17	April 77	T Sh -	-	-	12500	-
Angle Dozer D-7	2	March 77	\$ 77,886.00	637731	10707	648432	-
Roller Hyster	2	March 77	\$ 24,624	201621	48313	249934	-
Wheel Loader 920	4	March 77	\$ 35,513	290780	6100	296680	-
Wheel Loader 930	2	March 77	\$ 45,580	373209	6702	379911	One was taken by Army.
Track Loader 951C	2	March 77	\$ 47,316	387423	8300	395723	-
Heater/Spray 250	16	March 77	\$ 4,076	69239	18320	87559	-
Heater 500	8	March 77	\$ 4,586	77902	20593	98495	-
Roller Bom 3/4 tn	14	March 77	\$ 2,013	34195	9043	43238	-
Heater 1500	1	March 77	\$ 6,095	103536	27379	130915	-
Decanter 3000	1	March 77	\$ 9,442	160,391	42395	202786	Mwanza.
Grader D-720	15	Feb. 77	\$ 55,162	451,666	34748	486414	-
Wheel Tractor 444	16	Feb. 77	T Sh -	-	-	88622	-
Wheel Tractor 574	20	Feb. 77	T Sh -	-	-	89290	-
Truck Tractor Scania	2	May 77	SW-KR 199300	376278	11960	388238	Were taken by Army.
Trailer Low Ld. 30T	2	May 77	SW-KR 126500	288832	8310	247142	Were taken by Army.
Crushing Plant/1131/5245	1	Aug 77	\$ 140,022	2378554	628786	3007340	Mwanza.
Asphalt Plant 50TPH	1	Aug 77	\$ 105481	1791806	473691	2265497	Mwanza.
<u>SECOND BID CALL</u>							
Caravan 2 Bed	6	July 78	\$ 5,954	50050	1050	51060	-
Mobile Workshop	10	Jan-Oct 78	\$ 91,477	768966	16135	784540	Three were taken by Army.
Roller Towed 13-wheel	6	April 78	\$ 5,538	46242	2300	48542	-
Trailer Low Ld. 20T	2	Aug. 78	DM 43364	149782	9192	158974	-
Lubricating Unit	19	April 78	\$ 7,333	101063	8937	110000	-
Diesel Fuel Tank Trailer	20	Aug. 78	DM 31774	109750	6379	116129	-
Concrete Vibrator	2	Aug. 78	T Sh -	-	-	11400	-
Distributor Bitumen 1000 gal.	1	July 78	\$ 29,377	223956	16940	240896	-
<u>THIRD BID CALL</u>							
Compactors Lot	2	June 79	\$ 52,422	419900	17470	437370	-
Paver	1	June 79	\$ 41,060	635608	31822	667431	-
Air Track Drills	2	July 79	\$ 34,598	277130	11540	288667	-
Compressor 600 CFM	2	June 79	Yen 5723600	190024	21976	212000	-
Compressor 125 CFM	5	June 79	Yen 1932600	64162	7838	71700	-
Saloon Car Toyota	3	Feb. 79	\$ 4,795	38408	5790	44198	-
Minibus Toyota	2	Feb. 79	\$ 5,670	45417	6847	52264	-
Stawagon 4x4 Toyota	4	Feb. 79	\$ 8,095	64841	9775	74616	-

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Fourth Highway (Maintenance) Project - (Credit 507-TA)

Actual and Expected Project Implementation

<u>Project Component</u>	<u>Dates of</u>						<u>Percent of Completion by Expect. Date</u>
	<u>Contract Award</u>		<u>Beginning of Work/delivery</u>		<u>Completion of Work/delivery</u>		
	<u>Actual</u>	<u>Expected</u>	<u>Actual</u>	<u>Expected</u>	<u>Actual</u>	<u>Expected</u>	
1. Technical Assistance and Consulting Services							
(a) Advisory and Training Services	9/76	11/74					
(i) First Group			11/76	1/75	11/79	12/77	33
(ii) Second Group			7/80	N.A	12/80	N.A	N.A
(b) Trucking Industry Study			5/75	12/74	9/76	6/75	15
2. Training Aids			12/76	8/75	9/78	6/78	99
3. Road Maintenance Equipment							
4. Workshop Equipment			2/77	1/76	6/79	6/77	58
5. Building Construction							
(a) Workshop and Offices			6/76	7/75	-1/	12/77	
(b) Road Camps			9/76	1/75	-1/	6/77	10
6. Materials			6/76	1/75	-1/	6/78	20

1/ Not completed on project closing date.

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Fourth Highway (Maintenance) Project (Credit 507-TA)

Project Completion Report

Actual and Appraisal Estimates of Project Costs
(US \$ Thousands)

Project Component	Actual Cost ^{1/}			Appraisal Estimate ^{1/}			Actual Cost as % of Appr. Est.
	Local	Foreign ^{2/}	Total	Local	Foreign	Total	
1. Technical Assistance							
(a) Advisory and Training Services	50	2,375	2,425	135	2,670	2,805	82
(b) Studies	10	80	90	5	40	45	
2. Training Aids	5	95 ^{3/}	100	65	270	335	
3. Road Maint. Equipment	1,000	6,765	7,865	245	4,660	4,905	134
4. Workshop Equipment				50			
Subtotals ^{4/}			10,480			9,058	116
5. Building Construction	0	0 ^{5/}	0 ^{6/}	1,135	200	1,335	
6. Materials	15	25	40	615	1,440	2,055	
Totals	1,180	9,340	10,520	2,250	10,200	12,450	

^{1/} Rounded figures due to lack of accurate cost data; an exchange rate of US\$1 = TSh 8 for actual cost and US\$ 1 = T.Sh 7.14 for forecast estimate of costs was used.

^{2/} Foreign exchange component used as basis for disbursement.

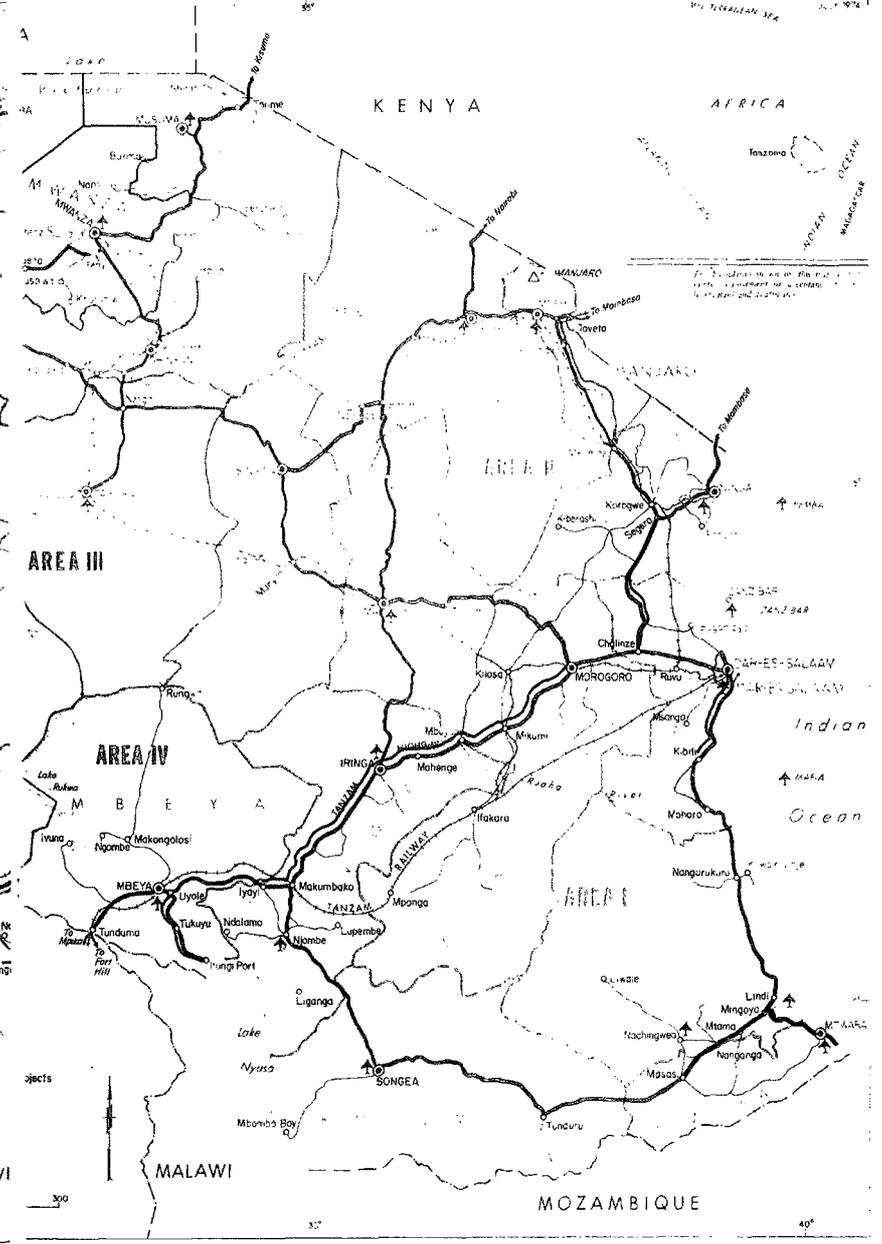
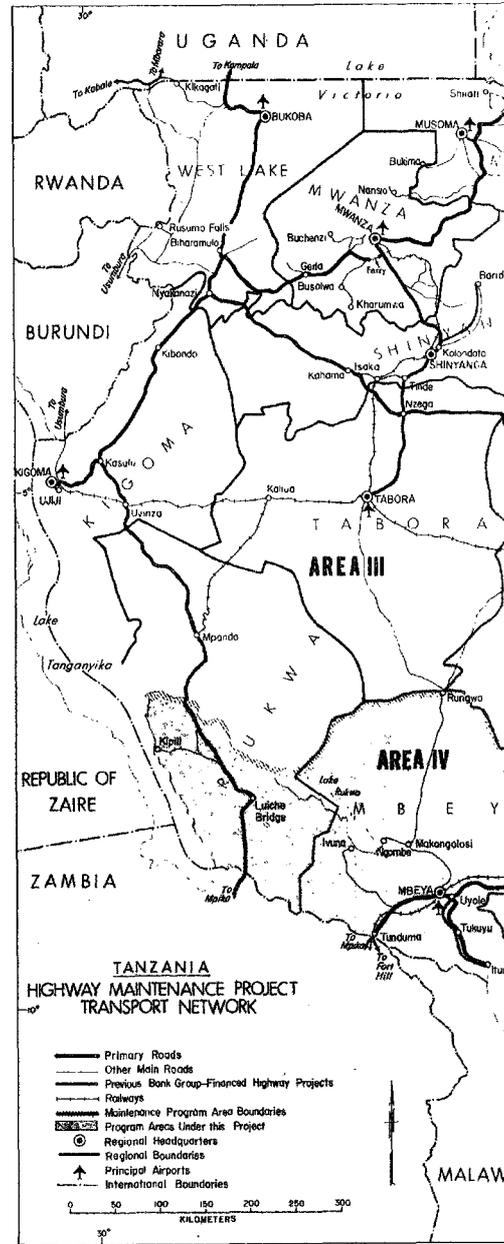
^{3/} Included in technical assistance bills.

^{4/} Since the expenditures, claimed for credit disbursements by the Borrower under items 5 and 6, are not representative for the building work actually executed and for the materials actually purchased, a comparison of costs with estimates has to be limited to items 1 to 4.

^{5/} Less than US\$200.

^{6/} Credit funds under these four items were, with minor exceptions, not claimed for disbursement.

MAP SECTION



Scale: 1:500,000
 Date: 1974
 Project: Highway Maintenance Project
 Prepared by: [unreadable]
 Checked by: [unreadable]