

AFR TZA/S 303/90

**STUDY ON DAR ES SALAAM
ROAD IMPROVEMENT AND
MAINTENANCE PROGRAMME**

FOLLOW-UP REPORT 1995

Project data

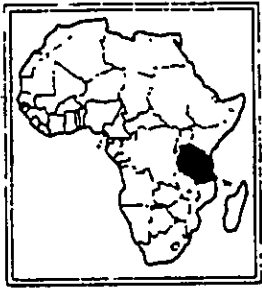
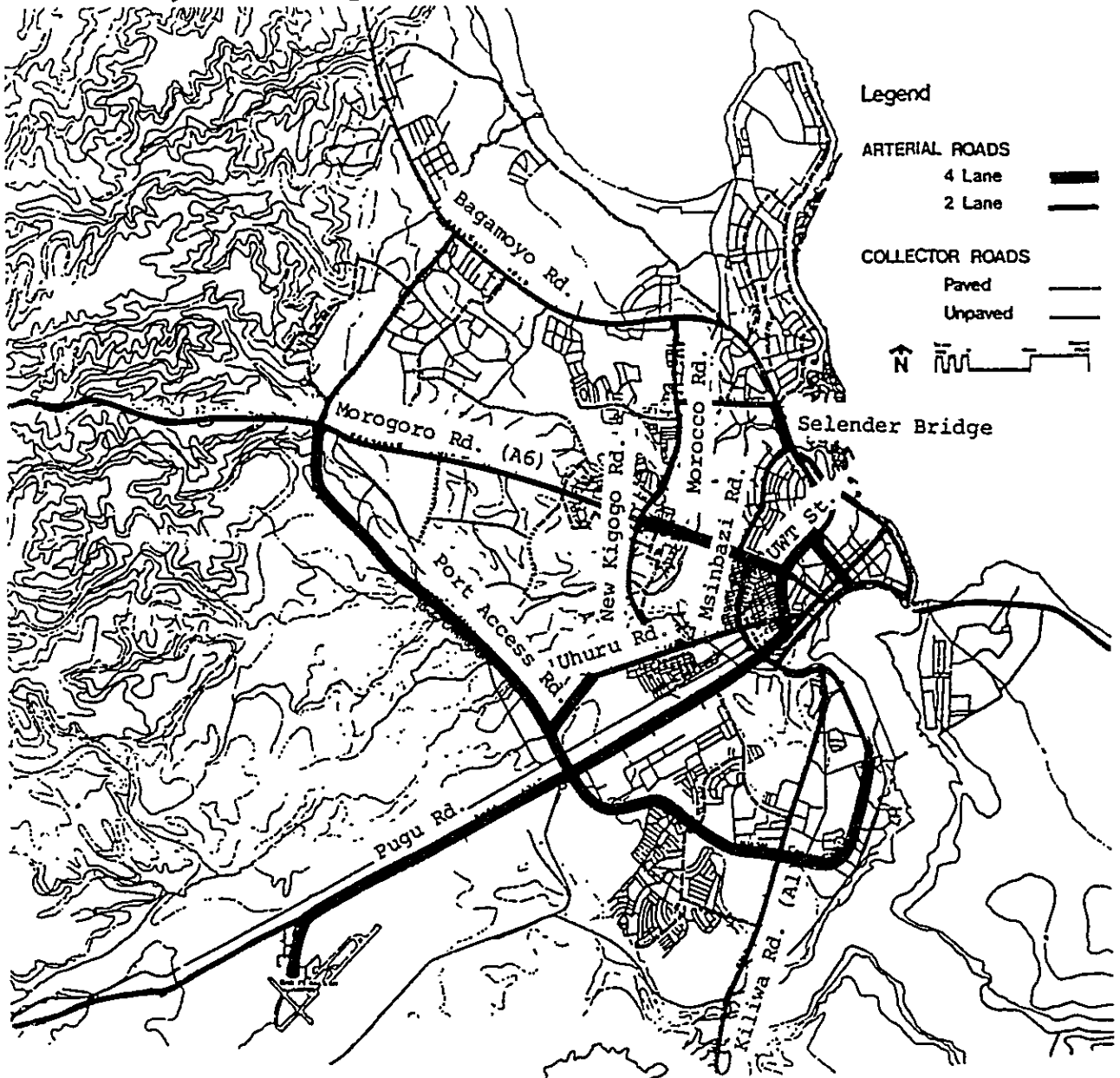
Region:	Africa
Country:	United Republic of Tanzania
Sector / Subsector:	Transportation / Road
Code No:	AFR TZA/S 303/90
Type:	Master Plan and Feasibility Study
Counterpart Agency:	Ministry of Works, Communications and Transport
Fiscal Year Completed:	1990
Consultants:	Japan Engineering Consultants Co., Nippon Koei Co.,
Expenditure:	214,868 (¥'000)
Present Status:	Implementing

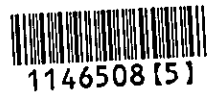
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Project site map / location





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1 Executive Summary

Summary of survey results

The proposed programme of road maintenance and improvement was implemented and the final phase is due for completion in January, 1996.

Extensive training for roads department engineers was provided which has provided the council with the technical competency to implement a satisfactory roads maintenance programme. However, although plans are in place to broaden the ability of the council to generate revenue to fund the maintenance regime, this has yet to materialise. This is compounded by ageing maintenance plant for which the council is presently considering an application for assistance to renew.

Efforts were made by the various agencies involved or affected by the programme (eg: utilities) to coordinate activities. However, in respect to the city's water supply, this has appeared to have been inadequate and it is now likely that, with the implementation of the water supply rehabilitation programme, a considerable amount of damage to the recent road works programme will occur.

Conclusions

Although the improvement of the roads has made a significant contribution towards the city's general economic and infrastructural development, the implementation of the project raised the issue of poor development project coordination.

The blame of this appears to lie at the door of :

- poor communication between JICA consultancy teams working in related areas;
- insufficient planning and liason between parent ministries;
- the donors failure to recognise the recipient governments inability to fully meet the requirements of the project. The impetus of both parties appears to have overridden careful strategic planning.

Recommendations for JICA

Specifically, JICA should support any moves which would lead to better coordination of utility development and the promotion of more effective and cost efficient development processes.

JICA may also wish to support the current moves by the Planning Commission and the Ministry of Finance to prepare and use an Aid Strategy document that will co-ordinate donors by sector. Prepared in collaboration with donors, this strategy would be used primarily by the Aid Co-ordination unit in the Ministry of Finance.

Dissemination and following action

Apart from the JICA UK Office, it is anticipated that this report will be distributed among the relevant Tanzanian Government authorities associated with the project: Dar es Salaam City Council and the Ministry of Works.

2 Results of survey: Project Design

Identification and outline of project rationale:

In 1989 the Government of the United Republic of Tanzania requested Japanese Government assistance to draw up a master plan for road improvement within the Dar es Salaam urban area, including a feasibility study for high priority projects and the establishment of an effective maintenance system.

Short description of project

The project identified and prioritised key development areas for road improvement and maintenance in Dar es Salaam. This included a four phase development programme spread over four years. The project development was divided into four categories:

- A Road Improvement
- B Pothole repair
- C Establishment of new main depot, training, and procurement of equipment
- D Detailed design and survey

Detailed design

The following were identified as the key areas requiring attention:

- | | |
|------------|-------------------------------------------------------------------------|
| Category A | Road Improvement |
| | I Widening of Bagamoyo Rd (9.8 km) |
| | II Widening of Morogoro Rd (5.9 km) |
| | III Chang'ombe Area Roads (15.2 km) |
| | IV Kariakoo Area Roads (31 km) |
| | V Mwinjuma Area Roads (16.9 km) |
| | VI Central Area Roads (20 km) |
| Category B | Pothole repair |
| Category C | Establishment of new main depot, training, and procurement of equipment |
| Category D | Detailed design and survey |

Implementation was to be in four phases:

Phase I, 1990	Category D fully implemented
Phase II, 1990/1	Category A road improvements initiated Category B fully implemented Category C procurement of equipment implemented
Phase III, 1992/3	Category A road improvements continued Category C training initiated
Phase IV, 1993/4	Category A road improvements completed Category C training completed

The project was examined and concluded to be technically and economically feasible with a Benefit/Cost ratio of 2.46 and internal rate of return of 25.1%.

Direct benefits were expected to be obtained through improved vehicle operating costs and time costs.

Funding

The project was joint funded through Japanese grant aid of 4,871,500 (¥'000) and Tanzanian Government funding of 3,608,200 (Tshs'000) over 4 years.

Critique of project design

Documentation and interviews do not indicate that the programme fully considered other developments (eg: utilities) which may, in future, affect the implementation or later maintenance of the improvements. During implementation, the City Council collaborated with NUWA both formally and informally to locate and replace damaged pipes that were encountered by the road works. However, the long-term programme of implementation has not been carried out in a logical sequence.

3 Results of survey: Project Implementation

Implementation and monitoring

The improvement and maintenance of the Dar es Salaam roads was identified as a priority project and was recommended in the short term plan of the Master Plan. The implementation of this programme was authorised by the Tanzanian Government and the Japanese Government was requested to assist.

The master plan has been in implementation since July 1991 and is due for completion in January, 1996.

Monitoring has been three-fold:

- implementation by a Japanese consultancy with five Dar es Salaam City Council counterpart engineers;
- production of monthly technical progress reports by Dar es Salaam City Council;
- overseas review studies after each phase.

In addition to this, there were monthly reports by all parties involved in the implementation of the programme (ie: the client, construction team, and consultants). This enabled effective and prompt communication between the parties, as well as effective management of resources.

There were also frequent informal co-ordination meetings with other ministries and agencies, the National Urban Water Authority (NUWA), and contractors to ensure that the works did not conflict. An effort was also made to inform all the relevant government departments of the programme and plans to avoid unnecessary damage to drains, water pipes, or telephone cables.

Development to date

Feasibility study	Completed	1991
Ph 1 started 1991	Completed	1992
Ph 2 started 1992	Completed	1993
Ph 3 started 1993	Completed	1994
Ph 4 started 1994	due for completion	January 1996

Processes

JICA sent a study team composed of members from the Japan Engineering Consultants Co., Ltd and Nippon Koei., Ltd.. They visited Tanzania three times between March 1989 and March 1990. The team held discussions with the appropriate Tanzanian government and City Council officials. Field surveys were carried out and, after returning to Japan where further studies were carried out, the report was produced.

Operation

There were frequent informal coordination meetings with other ministries and NUWA to ensure that works did not conflict. All the relevant government departments were informed of plans to ensure avoidance of unnecessary damage to drains, water pipes, or telephone cables.

Impacts

The reconstruction of roads and the implementation of an appropriate maintenance regime has provided better traffic flow, reduced vehicle operating costs, and an improvement of the economic efficiency in Dar es Salaam through more efficient transport. In some areas, the associated improvements in drainage and other utilities has also brought significant improvements in health and quality of life.

Ribbon commercial, industrial, and residential development has occurred along many of the improved roads.

Over 40% of the city's population directly benefited from the programme, while an additional 25% of the population were believed to have benefited indirectly.

Sustainability

Dar es Salaam City Council has upwards of 1,400 official roads to maintain with very limited funding. As part of the recommendations of the programme it is anticipated that the City Council will soon be able to implement some cost-recovery processes and channel the results directly into the roads maintenance programme. In particular, maintenance and future

road developments will be funded out of an improved revenue generation programme which includes parking fees, fuel tax, and property tax. As part of this, the City Council is expected to shortly approve the implementation of a metering programme within the city centre.

Even with such developments there remains some doubts over the likely success of collection methods; whether effective and appropriate allocation of funds by council (ie budgeting) will occur; and the transparency and accountability of these procedures.

Other actions that are expected to be taken to improve sustainability include a programme to encourage the development of private sector construction companies capable of carrying out maintenance works. Skills gained by Dar es Salaam City Council engineers and other staff from the associated on the job training programme are considered very important. These will be utilised within a new City Council facility that is being established to monitor road conditions, recommend actions, and supervise the work carried out by private sector construction companies.

It is also anticipated that the increasing ability to source spare parts and materials in-country, and a higher standard of ability and number of professionals, both in the private and public sector in Tanzania should raise the cost-effectiveness of future works.

4 Results of survey: Conclusions

General comments on development

The implementation of the road improvement and maintenance programme for Dar es Salaam has been a success and must be considered as having made an important contribution towards the city's general economic and infrastructural development.

Despite this success, a key issue concerning implementation should be noted:

- Although frequent informal coordination meetings were held with other ministries and agencies to ensure that the RIMP programme did not conflict with other short-term initiatives, long-term planning has suffered.

The rehabilitation of Dar es Salaam's water supply is now a priority project for funding. The implementation of this large-scale project will inflict a considerable amount of damage to the recent road works programme. JICA contractors performed the feasibility studies for both programmes and may have been aware of the imperative to co-ordinate project implementation in a logical sequence. However, neither feasibility study specifically mentions the impact that one project would have on the other. In this instance, it appears that the pressure to secure and mobilise donor funds has overridden a logical planning sequence.

Specific comments on JICA's role

The Dar es Salaam City Council feel that the relationship with JICA has been very effective. Where compromise and prioritisation was necessary, JICA viewed sympathetically any proposals made by the City Council and other parties. The on the job training associated with the improvement and maintenance programme has also been very effective.

JICA should support any moves which will lead to better coordination of utility development in Dar es Salaam and the promotion of more effective and cost efficient development processes. In particular, improved communication between the various implementing agencies and between the various donor agencies must be rigorously pursued and implemented.

JICA may also wish to support the current moves by the Planning Commission and the Ministry of Finance to prepare and use an Aid Strategy document that will co-ordinate donors by sector. Prepared in collaboration with donors, this strategy would be used primarily by the Aid Co-ordination unit in the Ministry of Finance.

Requests for further surveys

The Dar es Salaam City Council have recently modified their recent request for funding. The current goal within the roads department is to promote the improvement of the roads in the high population low cost housing areas over further city centre road developments. The new proposal promotes further improvement and maintenance of the current road infrastructure. It involves:

- the rehabilitation of local roads, particularly for high density population areas;
- the continuation of the middle ring road.

The proposal for this programme is currently with the city council and is expected to be forwarded to the Prime Ministers Office, the Planning Commission, and the Ministry of Finance for consideration soon after parliament has resumed.

Additional equipment and heavy plant will soon be required to supplement or replace the existing ageing plant. This will be necessary before the impacts of improved revenue will allow the council to purchase such equipment independently. It is likely that the Japanese Government will shortly be approached to assist in the purchase of this equipment.

Annex A: Interview

Interviewees

Mr Gamba, Dar es Salaam City Council City Engineer
Mr Paul Gasinzigwa, Dar es Salaam City Council Project Manager
Mr Ringo, Dar es Salaam City Council Roads Department

Interview notes from Mr Gamba and Mr Gasinzigwa of the Dar es Salaam City Council.

(Note: Questions given in Italics)

Who initiated the project?

The project arose out of recommendations by the JICA study team looking at road development in Dar es Salaam.

How were prioritisation of road improvement arrived at?

The prioritisation of roads to improve was easy. You can take any road and improve on it. All our roads are in terrible condition. But obviously we tried to repair the arterial roads first, and then the main through routes, and feeder roads, and down to node level if it was obvious and in need of repair.

What monitoring/reportage existed for the project?

The monthly progress reports are there, but very technical. Reports were by all parties - client, construction team, consultants- and enabled effective and prompt communication, as well as effective management of resources.

Were significant changes made in the design, operation and management of the scheme?

Some small modification has been required along the way.

Is the project on schedule?

Phase four (the final phase) is not scheduled for completion until the end of January, a month late.

Did you consult with others during the construction and implementation of the project?

There were frequent informal coordination meetings with other ministries, NUWA, to ensure that our works do not conflict with theirs. We try to inform all the relevant government departments

of our plans so that they can tell us where there are drains, water pipes, or telephone cables.

What is the capability of Dar es Salaam City Council to continue to maintain the improved roads?

There has been encouragement of the development of private sector construction companies capable of carrying out maintenance works in Dar es Salaam. There has also been the development of a facility within City Council to monitor road conditions and the private sector construction companies.

We are now very interested in revenue collection, this is linked to the restructuring of Government. We're investigating parking fees, toll roads, and a fuel tax. We have upwards of 1,400 official roads to maintain and with very limited funding, we have to try to obtain some cost-recovery directly into the roads maintenance.

Will the revenue generation be sufficient to meet maintenance costs?

The revenue should be sufficient but there may be problems with collection methods, the effective allocation of funds by council (ie budget), and in transparency and accountability.

Is the management adequately skilled to maintain and operate the scheme in the foreseeable future?

Yes. There was considerable on the job training for city council engineers.

Are there plans for any further work?

We have recently submitted a proposal to the City Council for approval to apply for donor funding for the rehabilitation of additional local roads and the extension of the middle ring road. This would be instead of the proposal for road development currently with the Japanese Embassy for consideration.

Are there any other perceived problems?

Supply of equipment, current plant is aging and can not expect to have a much longer life. Further equipment will be required if Dar es Salaam City Council can attempt to effectively maintain the roads.

Annex B: Photographs of project



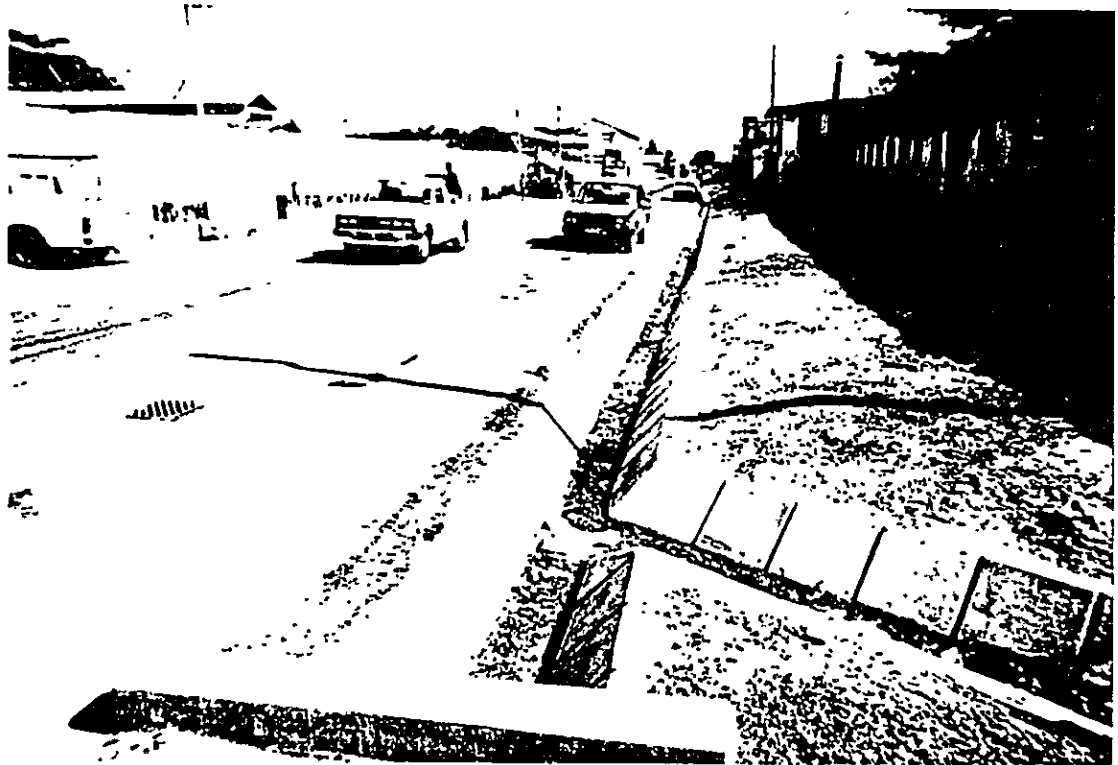
1 Unimproved road in low density area (Oyster Bay)



2 Improved road in low-density area (Oyster Bay)



3 Improved Road in inner city area (Kariakoo market)



4 Improved road in Chan'gombe industrial area

Annex C: Terms of reference and purpose of survey

Terms of Reference

- The JICA UK Office has requested the consultants to prepare an independent follow-up survey in Tanzania.
- It is proposed that the work be carried out between Thursday 9th November and Friday 22nd December, 1995.
- The survey will comprise a broad evaluation and current appraisal of thirteen (13) Master Plans, Feasibility Studies, and Basic Studies in comparison to the present and future status of the individual projects or studies.
- The scope of work will cover:
 - a) Study on Water Resources Development in the Ruvu River Basin
 - b) Study on Dar es Salaam Road Development Plan
 - c) Natural Soda Development in Lake Natron and Related Transportation Facilities
 - d) Kilimanjaro Region Integrated Development Plan
 - e) Southern Coast Link Road Project
 - f) Proposed Mahale Mountains National Park
 - g) Lower Moshi Agricultural Development Project
 - h) Mkomazi Valley Area Irrigation Development Project
 - i) Expanded Afforestation Work in the Same District of Kilimanjaro Region
 - j) Road Improvement and Maintenance in Dar es Salaam
 - k) Lower Hai and Lower Rombo Agricultural Development Project
 - l) Rehabilitation of Dar es Salaam Water Supply
 - m) Topographic Mapping of Mwanza-Geita Block in the United Republic of Tanzania
- If possible, the survey will cover recent and relevant developments in the context of each project or study.
- Where appropriate, the reports will comprise questionnaires, interviews and highlight following actions for JICA and/or the Government of Tanzania.
- The reports will contain a detailed itinerary, records of interviews made and sources of information.

- The quantity and quality of information contained in the reports will reflect the availability and accessibility of information in Tanzania.
- The reports will be prepared in draft form and presented to the relevant implementing Ministries for comments before leaving Tanzania.
- Final report texts and layouts will be completed by Friday 22nd December, 1995.

Purpose of survey

This report comprises a descriptive assessment of the progress of the project against the objectives of the project as described in the original study. The purpose of the survey is to:

1. Describe project achievements to date by their:
 - A. Impacts
 - B. Effectiveness
 - C. Relevance
 - D. Efficiency
 - E. Sustainability
2. If required, produce specific and general recommendations to improve the performance of this and other similar projects
3. Further communication between funding agencies, design consultancies, implementing agencies and project beneficiaries

Annex D: Methodology and chronological itinerary

Methodology

As far as possible, the survey was performed by a structured process:

- identify the authorities involved;
- identify and locate key informants within the authorities;
- locate adequate documentation and reportage;
- define aims of project;
- conduct interviews on specific and general issues;
- define indicators of achievement and/or progress;
- visit the site;
- analyse the collected data;
- prepare draft report;
- discuss the draft report with key informants;
- edit and prepare final report text.

Chronological Itinerary

Wednesday, November 15th

- Meeting with Ministry of Works
- Meeting with Road Department Officials
- Meeting with Dar es Salaam City Council
- Meeting with Dar es Salaam City Council roading engineers
- Tour of town to visit road improvement and maintenance sites

Annex E: References & reports used in survey

JICA, Japan Engineering Consultants Co., Ltd (1990) The Feasibility on Road Improvement and Maintenance in Dar es Salaam. Final Report: Summary. July 1990

JICA, Japan Engineering Consultants Co., Ltd (1990) The Feasibility on Road Improvement and Maintenance in Dar es Salaam. Final Report: Main Report. July 1990

JICA (1991) Basic Design Study Report on The Project for Road Improvement and Maintenance in Dar es Salaam in The United Republic of Tanzania. March, 1991

Government of Tanzania, Ministry of Works, Communications and Transport (1995) Integrated Roads Project (IRP) Monthly Progress Report No 52. Mimeo, September 1995

JICA, Japan Engineering Consultants Co., Ltd (1995) The Study on Dar es Salaam Road Development Plan. Final Report: Master Plan Study and Feasibility Study. Summary. March 1995

JICA, Japan Engineering Consultants Co., Ltd (1995) The Study on Dar es Salaam Road Development Plan. Final Report: Master Plan Study and Feasibility Study. Main Text. March 1995

Government of Tanzania (1995) Application Form for Japan's Grant Aid. October 1995

Government of Tanzania, Ministry of Works, Communications and Transport (1995) Aid Proposal for Dar es Salaam Road Development Project. Widening of Middle Ring Roads and Rehabilitation of Local Roads. October 1995

Government of Tanzania, Ministry of Works, Communications and Transport (1995) Integrated Roads Project (IRP) Monthly Progress Report No 52. Mimeo, September 1995

