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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

GUYANA - NEW AMSTERDAM ROAD APPROACHES AND BRIDGE PROJECT

504-22-311-071

504-L-011

AID-ILC/P-1026

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AID-DLC/P-1026

May 19, 1972

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Guyana - New Amsterdam Approaches and Bridge Project

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed \$3,000,000 to the Government of Guyana to assist in financing the United States dollar and local currency costs of a project to construct a new bridge over the Canje River and to construct and improve New Amsterdam approach roads and certain city streets.

Please advise us as early as possible but in no event later than close of business on Tuesday, May 30, 1972, if you have a basic policy issue arising out of this proposal.

Rachel R. Agee
Secretary
Development Loan Committee

Attachments:
Summary and Recommendations
Project Analysis
ANNEXES I-IV

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GUYANA

NEW AMSTERDAM ROAD APPROACHES AND BRIDGE PROJECT

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May 19, 1972

GUYANA
NEW AMSTERDAM ROAD APPROACHES AND BRIDGE PROJECT

PART I SUMMARY AND RECOMMENDATIONS

1. BORROWER: The Borrower will be the Government of Guyana (GOG) acting through the Ministry of Finance. The Ministry of Works, Hydraulics and Supply (MWHS) will execute the program.

2. LOAN: a) Amount: Not to exceed three million dollars (U.S. \$3.0 million).

b) Terms: Repayable in 40 years, including a grace period of 10 years at an annual interest rate of two percent (2%) during the grace period and three percent (3%) thereafter.

3. TOTAL PROJECT COST: The total cost of the project is distributed as follows:

	<u>FX</u>	<u>LC</u> ^{1/}	<u>TC</u>
AID	\$1,869,500	\$1,130,500	\$3,000,000
GOG	- 0 -	\$1,000,000	1,000,000
	<hr/>	<hr/>	<hr/>
	\$1,869,500	\$2,130,500	\$4,000,000

^{1/} Local currency is expressed in dollar equivalents. The exchange rate between the Guyana and U.S. dollar is approximately 2 to 1.

4. PROJECT DESCRIPTION: The proposed loan will assist the Government of Guyana by providing 75% of the cost for the construction and improvement of the New Amsterdam Approach Roads, New Amsterdam city streets and construction of a bridge over the Canje River; providing consulting services to prepare final plans, specifications and contract documents; providing construction supervision; and providing procurement of off-shore materials and supplies necessary for the project.

The New Amsterdam project consists of removal and replacement of the existing 80 year old Canje River Bridge, improvement of 1.7 miles of New Amsterdam city streets and three major roads: the East Bank Berbice road which extends southerly from New Amsterdam to Sisters along th Berbice River, a distance of 6.2 miles; the West Canje Road which is approximately 3.1 miles in length and extends easterly from New Amsterdam to the village of Rising Sun; the 8.6 mile East Canje Road which roughly parallels the West Canje Road but is located on the eastern side of the Canje River. (See Annex II, Exhibit 1 for the Project Area Map).

5. PURPOSE/JUSTIFICATION: The economic development of Guyana is concentrated almost exclusively in the northeast section of the country along the Atlantic Coast and the Demerara and Berbice Rivers. Industrial and manufacturing development is concentrated primarily in Georgetown and New Amsterdam. The only other areas of intensive development is the bauxite mining and processing in Linden, some 70 miles south of Georgetown on the Demerara River. The heaviest concentration of rice and sugar production is in the coastal plain between Georgetown and the Surinam border. With the completion of the New Amsterdam and Georgetown Approaches projects the area of principal economic activity will be linked by an adequate highway system permitting a more rapid growth in economic activity than heretofore possible in Guyana.

The Consultants economic evaluation of the project is favorable. Benefit cost ratios for the project areas are as follows: East Bank Berbice Road 2.14, West and East Canje Roads 2.4 and Canje River Bridge 3.41. Similarly the internal rate of return calculations are favorable as is shown by the rates calculated: East Bank Berbice Road 31%, West and East Canje Roads 25% and Canje River Bridge 37% (when combined with the Corentyne Road for evaluation purposes). For purposes of economic evaluation the costs of improving and maintaining the New Amsterdam streets were allocated equally between the East Bank Berbice and the two Canje roads. (See Section II, C.).

6. OTHER SOURCES OF FINANCING: The Export-Import Bank, the World Bank (IRBD) and the Caribbean Development Bank indicated no interest in the proposed financing in their letters of November 5, 1971, November 16, 1971 and May 18, 1971 respectively. Guyana is not a member of the IDB and does not have borrowing rights from that institution.

7. VIEWS OF COUNTRY TEAM: The Country Team considers it urgent to improve the approaches to New Amsterdam in view of the economic, social and political impact which such a project would have. Also to be considered are the short-term employment effects of the construction program in view of the existing 30-40% unemployment rate. For these reasons the Country Team gives this project the highest priority.

The Country Team judges, on the basis of personal conversations between the Ambassador and the Prime Minister and conversations between the Mission Director and the Prime Minister and with other Ministers of the Government, that this project ranks fifth within the list of major undertaking in which the Government is involved.

As is clearly demonstrated by the benefit-cost ratios this project will have extremely positive effects on the nation's economy in terms of efficiency of transport and provide a high degree of user benefits.

8. STATUTORY CRITERIA: All statutory criteria have been or will be met. (See ANNEX III, Statutory Checklist for details).

9. ISSUES: None.

10. LOAN ADMINISTRATION: The applicable Capital Project Guidelines will be adhered to in all implementing actions.

11. RECOMMENDATIONS: On the basis of the conclusions of the Capital Assistance Committee that the project is technically, economically and financially sound, it is recommended that a loan to the Government of Guyana for an amount not to exceed three million dollars (\$3,000,000) be authorized subject to the following terms and conditions:

A. Interest and Terms of Repayment

Borrower shall repay the loan to AID in United States dollars within forty (40) years from the first disbursement under the loan, including a grace period of not to exceed ten (10) years. Borrower shall pay to AID in United States Dollars on the disbursed balance of the loan interest of two (2) percent per annum during the grace period and three (3) percent per annum thereafter.

B. Other Terms and Conditions

(1) To finally ensure the Borrower will make available the financial resources, equipment, personnel and other resources as required, the Borrower will confirm in writing prior to award of contract for any and each construction contract as to the availability of these inputs.

(2) United States dollars utilized under the Loan to finance local currency costs shall be made available pursuant to procedures satisfactory to A.I.D.

(3) Prior to the first disbursement or the issuance of any commitment documents under the Loan Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D. evidence of Borrower's intent to place under contract simultaneously the work for construction of the Georgetown Approach Roads financed under A.I.D. Loan 504-L-010 and the Canje River Bridge.

(4) Prior to any disbursement for construction, Borrower shall submit to A.I.D. in form and substance satisfactory to A.I.D. evidence that all rights-of-way for permanent construction, including provision for temporary detours as necessary, have been obtained.

(5) Borrower shall covenant to make and to cause the municipal government of the City of New Amsterdam to make, adequate provisions in their respective budgets annually for the costs of maintaining the Project.

(6) The loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

Capital Assistance Committee

Loan Officer:	J. Shea, LA/DR
Engineer:	M. Brigham, USAID/G W. Gardner, LA/DR
Economist:	C. Bischoff, LA/DR J. Sartorius, USEMB/G
Lawyer:	N. Williams, LA/GC
Approved by:	Robert C. Hamer, USAID Director

PART II - PROJECT

Section I. NATURE OF THE PROJECT

- A. PROJECT DESCRIPTION: The proposed loan will assist the Government of Guyana by providing 75% of the cost for the construction and improvement of the New Amsterdam Approach Roads, New Amsterdam city streets and construction of a bridge over the Canje River; providing consulting services to prepare final plans, specifications and contract documents; providing construction supervision; and providing procurement of off-shore materials and supplies necessary for the project.

The New Amsterdam project consists of removal and replacement of the existing 80 year old Canje River Bridge, improvement of 1.7 miles of New Amsterdam city streets and three major roads: the East Bank Berbice road which extends southerly from New Amsterdam to Sisters along the Berbice River, a distance of 6.2 miles; the West Canje Road which is approximately 3.1 miles in length and extends easterly from New Amsterdam to the village of Rising Sun; the 8.6 mile East Canje Road which roughly parallels the West Canje Road but is located on the eastern side of the Canje River. (See Annex II, Exhibit 1 for the Project Area Map).

Typical sections for road construction and bridge widening for the roads are as shown in Exhibits 2 and 3 of Annex II. A site map showing the selected and alternate locations for the Canje Bridge together with a typical section of the selected bridge plan are shown in Exhibits 4 and 5 .

The average daily traffic on the Existing East Bank Berbice Road close to New Amsterdam is 1,100 motor vehicles, in addition to 280 motorcycles and 1,440 bicycles. Near Sisters, the road carries 400 motor vehicles, 70 motorcycles and 480 bicycles daily. For 1990, traffic projections indicate a volume of 4,770 motor vehicles close to New Amsterdam and 1,620 at Sisters.

The road is now unpaved. To enable it to carry the projected traffic at acceptable levels of service, it is proposed to pave the road with a bituminous double-surface treatment and widen its shoulders from New Amsterdam to Sisters, a distance of 6.2 miles. In many sections the roadbed would be raised to eliminate periodic flooding. The cost of construction by force account is estimated to be C\$1,810,000.

The improvement would be accomplished almost entirely within the existing right-of-way, except where some right-angle turns are eliminated and where a new alignment bypasses the heavily-populated area of Providence.

The West Canje road essentially parallels the East Canje road. Between New Amsterdam and Rising Sun now travel on an average day 275 motor vehicles, 100 motorcycles, and 1,200 bicycles. The projected traffic for 1990 is 1,260 motor vehicles, 450 motorcycles, and 5,840 bicycles. Beyond Rising Sun, traffic is very light and is not expected to increase to a substantial volume. It is proposed to improve the road between New Amsterdam and Rising Sun by raising the roadbed where required, providing shoulders, and paving the road with a bituminous double-surface treatment. The total length involved is 3.1 miles, and the estimated cost is G\$710,000 with construction by force account.

Due to the heavy truck traffic generated by the sugar estates, East Canje Road is the only road in the New Amsterdam area that has some paving, with the exception of the newly built Corentyne Road. East Canje Road carries a daily average traffic of 1,475 motor vehicles between Corentyne Road and Rosehall, in addition to 430 motorcycles and 1,660 bicycles. At Enterprise the traffic volume is now 690 motor vehicles per day, while 370 motor vehicles travel beyond Enterprise to De Voedster. The traffic projections for 1990 indicate a volume of 11,010 motor vehicles to Rosehall, 1,430 motor vehicles to Enterprise, and 830 motor vehicles to De Voedster.

To accommodate this traffic, it is proposed to improve the existing two-lane road from New Amsterdam to Rosehall by providing adequate shoulders and an asphaltic concrete pavement. From Rosehall to Enterprise similar improvements are proposed, except that a bituminous double-surface treatment would be sufficient. Beyond Enterprise to De Voedster, the road would be improved to minimum standards.

The total length of this project is 8.6 miles; its total construction by force account is estimated to cost G\$1,360,000.

To distribute the traffic from the proposed improved approach roads within the City of New Amsterdam, improvements to certain city streets are required. They include an overlay of asphaltic concrete for Main Street, and improving a section of Water Street, Vreiheld Street, and Princess Elizabeth Road to the newly improved section of Corentyne Road leading to the Canje River Bridge.

The total length of the streets to be improved is 1.7 miles, and the corresponding cost with construction by force account is estimated to be G\$520,000.

The major investigations carried out as part of this project included systems considerations relating the Canje River bridge to the Corentyne Road; evaluation of six alternative sites for the replacement bridge; evaluation of five alternative types of structures for the crossing; possible modifications to shipping using the Canje River to reduce bridge vertical clearance requirements; and possible relocation of the Rosehall sugar and molasses transfer facilities to permit the construction of a fixed low-level crossing. Exhibit 6, Annex II summarizes the benefit cost analysis for each location and bridge type studied.

It was found that the Canje River bridge is a vital link in the Corentyne Road and must be viewed as an integral element of that system. The existing 79-year old bridge is functionally obsolete; it is in poor structural condition, has only 18 feet of clearance between the flanges of the through girders for a two-way roadway, has inadequate sight distance and poor alignment, requires full stop sign control on both approaches as a safety measure, and is drastically inconsistent with the high standard 50 miles per-hour design speed of the Corentyne Road on both sides of the bridge.

Based on benefit-cost considerations and other plan evaluation criteria, the existing bridge should be replaced by a modern swing bridge which ultimately can provide a 30-foot-wide pavement plus sidewalks. The new bridge would be located about 100 feet upstream of the present crossing and would permit river traffic to utilize a single 50-foot-wide channel. Such a facility, including the necessary approach roads and engineering and contingency costs, is estimated to cost G\$3,600,000.

If the benefits and costs developed for the selected swing bridge alternative are merged with those shown in Table 14 of the Supplement to the 1967 Report on the Corentyne and West Demerara roads prepared for the Ministry by the firm of Miller-Warden-Western, Inc., the resulting benefit-cost ratio is 3.41 and the internal rate of return is 37 percent for the Corentyne Road system from New Amsterdam to Crabwood Creek, including the new Canje River swing bridge.

B. BACKGROUND OF PROJECT

1. History of Project

The need for improvement of the Georgetown and New Amsterdam Approach Roads has been recognized by the Government of Guyana for over five years. With each passing year the pressure on the system has increased with commensurate public discontent being voiced.

The Government of Guyana's first attempt to reach a solution to the growing problems of the system was to request a feasibility study in the Fall of 1967.

The required advertisement was carried in the Commerce Business Daily on January 5, 1968, and, as a result, the firm of De Leuw Cather International was selected on September 10, 1968. The selection did not materialize into a contract. The Government subsequently selected the firm of Parsons, Brinckerhoff, Quade and Douglas (PBQ&D) on February 6, 1969. USAID approved the selection and a contract was approved on November 6, 1969.

The required letters of credit were established and PBQ&D started work on the feasibility plan November 6, 1969, with a planned completion date of September 1970. For various reasons, the draft report was delayed. A draft copy of the report was completed and submitted to the Government April 6, 1971. The final report was received in July, 1971 by the Ministry of Works, Hydraulics and Supply (MWHS). This report included a fully analysis and recommendations relative to the Georgetown Approaches, New Amsterdam Approaches and Canje River Bridge.

During the preparation of the study a series of discussions were held at the technical level by a technical review team consisting of AID/W, DOT, USAID/G, PBQ&D and MWHS personnel. A major issue, discussed and resolved, by the review team was the level of force account work which the GOG could undertake given the existing and forecasted activity of the MWHS over the time span of the project (1972-1975). It was agreed that the GOG's capacity indicated they should work only on the Georgetown City streets and by-pass, the New Amsterdam City streets and the New Amsterdam approach roads. A foreign contractor was to be assigned all other construction work, i.e. the Georgetown Approach Roads and Canje River Bridge.

The GOG's formal application for the Georgetown-New Amsterdam project, received June 8, 1971, requested a US\$10 million loan to finance 75% of the estimated cost to construct the total project, by force account. The application did not request financing of the Canje River Bridge sub-project. Obviously, in view of the previous appraisal of the force account capabilities, agreement could not be given to the GOG's request. Thus negotiations were initiated which resulted in the GOG's agreeing to modify their position. The agreed final position provided for the GOG to pursue the force account method on a 10.5 mile section of the East Bank Demerara road, in addition to the agreed Georgetown City work, in exchange for deleting the New Amsterdam components from the project. Based on this agreement AID Loan 504-L-010 Improvement of Georgetown City Streets and Approaches was processed and authorized.

The GOG in July 31, 1971 made a separate application for the New Amsterdam roads and Canje Bridge. This request was in the amount of US\$3.0 million. No positive action to process this application could be made in view of the appraisal of force account capabilities. Therefore, discussions as to the MWH&S capacity and the practicability of their position were continued throughout the summer and fall. These discussions were effectively buttressed by separate and parallel reviews being made by World Bank technical experts in conjunction with a proposed IDA financed road project on the West bank Demerara. At the October 29, 1971, I.R.R. session the question of MWH&S capability was again pinpointed. In mid-March, Minister of Works Hydraulics and Supply agreed with the Director, USAID/G that the GOG would accept the original division of work proposed by the technical review team for the Georgetown-New Amsterdam project, if AID would make the loan for the New Amsterdam project available under the terms applicable to the Georgetown Approach project, Loan 010.

We are, therefore, back to square one, only that two projects will be implemented. There is no change in either the scope, scheduling, division of work or costs as originally proposed.

2. Evaluation of Previous Assistance

In 1965 AID made a loan of \$5,500,000 (later increased to \$7,500,000) to construct a modern two-lane facility from Soesdyke to Linden (formerly Mackenzie), a mining town 50 miles up the Demerara River. Prior to construction of the Soesdyke-Linden highway there was very little economic activity between the two points. Today, three and a half years after the road's completion, there are several small scale logging operations in progress, several pig farms have been started, an agricultural research facility has been established, several shops are evident, land clearing efforts have been initiated by cooperatives and private persons, a large AID housing guaranty project has been started as have many week-end camps. Overall, a gradual development is progressing inwardly from opposite ends of the road.

The road financed under the first loan (Soesdyke-Linden) was officially opened in December 1968 and has been maintained and operated as a toll road by the Ministry of Works, Hydraulics and Supply. The maintenance problems have not been difficult because of adequate structural section of the travel ways; however, the road passes through a "White Sand Area" with several deep cuts and fills, which is subject to severe erosion during periods of intensive rainfalls. The Government has done a commendable job in maintaining these slopes and has made much progress in restoring the natural vegetation to the area. This has involved the placing of cover material, and the planting of grasses capable of surviving in this sandy soil. It is estimated that vegetation has been restored on about 65% of the exposed areas, and is predicated that within another two years re-growth will be fully established with the exception of a few of the higher cuts and fills.

In 1967, AID made a loan for \$7,500,000 to reconstruct 47 miles of the highway on the East Coast from Crabwood Creek (near the Surinam border) to New Amsterdam.

The second loan, providing for the reconstruction of the highway between Crabwood Creek and New Amsterdam, was completed in September of 1971. The road is fully operational. GOG is now in the process of installing three toll stations located at approximately both ends and the middle of the road. The contractors camp is being converted to a police and maintenance headquarters. It has been a highly successful project. Several local newspaper articles have given high praise to the project. Letters received from residents indicate much satisfaction with the project.

The route passes through a highly productive area, the principal products of which are rice, sugar, coconuts, vegetables and lumbering. The highway will provide transport facilities for these products to central markets in Georgetown for local consumption or export. In addition, it provides local service to small communities along the route for social and economic activities.

The GOG has fulfilled all of its obligations under the terms of the loan and contracts with Consultants and Contractors. The GOG have paid promptly all agreed local costs. They have supplied an adequate and capable local technical staff to work under the supervision of construction. The prime Contractor (Emkay S.A.), subcontracted a large portion of the work to local contractors, which has assisted in the development of local contracting institutions. The completion of the job was delayed a few months for various reasons and there will probably be further discussions and possibly arbitration regarding the final quantities of borrow. However, this does not reduce the effectiveness or value of the completed facility.

In November of 1971, AID Loan 504-L-010 was signed for an amount of US\$8,900,000 which is to provide an estimated 75% of the foreign and local costs to construct and/or reconstruct the principal Georgetown streets and Georgetown approaches from Mahaica to Georgetown on the East Coast and from Georgetown to Soesdyke on the East Bank of the Demerara. The total project will be 52½ miles of road, of which 13.6 miles will be a four lane divided section with shoulders. This will include 8.2 miles from Georgetown to Good Hope on the East Coast and 5.4 miles from Ruimveldt Area to Diamond Place on the East Bank.

The Government of Guyana is presently negotiating a contract with PBQ&D for final design, specifications and construction supervision. This contract has been delayed due to difficulties in arriving at an equitable cost arrangement. In the event they cannot reach agreement, it will be necessary to advertise and select a new consultant.

The Government, with their own staff, is presently doing the plans and specifications for the Georgetown streets, procurement of rights-of-way and field staking.

3. Reviews and Recommendations of Country Team

The IRR was approved by Capital Assistance Executive Committee (CAEC) on October 29, 1971.

USAID conducted a series of review sessions to consider each point raised in the IRR. These meetings also included, at times, members of the Ministry of Works, Hydraulics and Supply. Without exception a satisfactory resolution was reached.

The basic conclusions reached in the Mission Review was that the project was sufficiently matured to warrant intensive review. This review has now been completed and it is agreed the project is technically, economically and financially sound and that AID financing is warranted.

4. Opinion of Other Institutions

The Export-Import Bank and the World Bank were queried by AID/W as to their interest in participating in this project. Their replies, contained in letters dated November 5, 1971 and November 16, 1971, respectively, stated these institutions were not interested in assisting in financing the project.

The GOG asked the Caribbean Development Bank for an expression of interest in this project. The response dated May 18, 1971, was also negative.

No other institutions have expressed interest in providing financial assistance.

5. Environmental Effects:

Because the project involves improvement and realignment of existing roadways little impact on the environment is anticipated. The following factors were considered in judging the project's environmental impact:

- 1) Construction for the most part will take place in existing rights-of-way.
- 2) Where such is not the case, right-of-way will still not deviate too far from existing road.

- 3) Therefore, the environmental impact is likely to be minimal as the existing road has been in existence for some time and whatever environmental effects which could be expected from a road in this area have already occurred.

C. PROGRAM JUSTIFICATION

1. Place of Project in Country Program

The New Amsterdam Approaches project has been carried as a specific economic objective in the FY 1970 Program Memorandum and FY 71 and FY 72 Country Field Submissions. The relationship between the project and the U.S. objectives is spelled out in the referenced classified submissions. Essentially the rationale links economic growth to the direct and indirect attainment of overall policy objectives.

2. Place of Project in Guyana's Development Program

In 1953 a World Bank General Economic Survey Mission to then British Guiana found that "a greatly improved road transport system is imperative for further economic development of British Guiana". A 1967 review of the transport system by a Bank team found the 1953 conclusion "to be at least equally true today". This 1967 team established highway improvement and construction priorities within the GOG's Seven Year (1966-1972) Development Plan. This priority list has been an essential ingredient in the direction of AID's assistance and GOG force account activities. With the implementation of the loan proposed herein and an IDA loan which is almost finalized, the bulk of the priority projects scheduled within the Seven Year Development Plan will have been completed.

The World Bank is now preparing to assist the GOG in the establishment of a transportation economics division within the Ministry of Economic Development. This new unit will be responsible for developing a plan of the next series of project priorities (gauged at 200 miles of new construction or reconstruction). This highway program will be programmed within the framework of the five year master development plan now being readied to carry on at the conclusion of the 1966-1972 scheme.

A summary of accomplishments within the 1966-72 plan is presented at the conclusion of this section. It should be noted that, while the Bank's ranking has served as a basic guide, we have included certain items in both this loan proposal and other projects which either were not included in the rankings or were scheduled as lower priority and/or post 1972 projects. One such project is the Georgetown-

Soesdyke road which is being financed under the Georgetown Approaches project (AID Loan 504-L-010). The essentiality of that project was present in the Loan paper. The development scheme's priorities did not include the city streets improvements which undoubtedly were considered as a given to be accomplished as city growth demanded improvements. Neither was the Canje River Bridge considered. As this project is of marked importance to the totality of the Corentyne-Berbice program we have provided a comprehensive comment on this sub-project.

The essential nature of the Canje Bridge lies in the fact that it is the only available crossing of the Canje River. For the more than 120,000 inhabitants of Guyana living along the coast east of the Berbice River, it provides highway access to New Amsterdam and thence by ferry connection to the rest of the country. It is a vital link for the movement of people and goods between smaller urban developments such as Port Mourant, Skeldon, Crabwood Creek and their surrounding rural areas, and the industrial, commercial, educational, medical, health and other essential service facilities to be found in the larger cities of New Amsterdam and Georgetown. The regional nature of the service rendered by the bridge is evidenced by the 3,300 average daily traffic count in 1970 (including 390 trucks and 250 vans), despite the only 800 vehicles registered in New Amsterdam south of the bridge and only 3,800 vehicles registered in the entire coastal section of the country north of the bridge. In addition, the bridge serves almost 3,000 bicyclists and 500 motorcyclists on a typical weekday. It carries the highest traffic volume of any road section east of the Berbice River.

The grid iron street pattern of New Amsterdam south of the bridge can be generally categorised as a good feeder distributor system for the bridge. Virtually all of the major streets are paved and nearly three miles of street improvements are presently proposed. There appears to be adequate capacity to meet the anticipated growth in traffic demand. North of the bridge, work has been completed on the upgrading of 52 miles of the Corentyne Road to first-class highway standards with a design speed of 50 miles per hour, very flat grades, and two 11-foot travel lanes plus two 8-foot shoulders. In addition, over eight miles of the East Canje Road, which feeds into the Corentyne Road less than half a mile north of the bridge, is also planned for upgrading to the same high standards.

In contrast, the 79-year-old bridge provides only an 18-foot-wide two-way roadway between flanges of the through girders. The approximate five-foot height of the girders above the pavement, combined with a five percent grade and a horizontal angle of almost 28 degrees on the north approach, produces a hazardous condition and a very limited sight distance. The high accident rate associated with the bridge, including a number of fatalities in recent years, has required the installation of stop signs on both approaches, and all traffic must

now come to a full stop before crossing the bridge. The bridge has been rated as being in poor condition after examination by the Consultant's structural engineers. Adjustments to the swing span roadway plates were required in 1963, apparently because of longitudinal movement in the adjacent north span.

It is evident that the bridge, which has long since outlasted its economically useful life, constitutes the weakest link in the Corentyne Road. Its design and traffic service standards are considered to be inadequate for present, let alone future, traffic volumes. These characteristics of the existing bridge are inconsistent with the high standards of the Corentyne Road and, in combination with the sharp horizontal angle of its north end, present continuing conditions of high accident probabilities.

An indication of the effect of a bridge failure can be gathered from a shipping accident that occurred approximately ten years ago, placing the bridge out of commission for about three weeks. The only means for the movement of people and merchandise across the Canje River was an improvised system of small boats serving as ferries. Traffic volumes have more than doubled since that time. Although it is impossible to quantify the economic consequences of virtually isolating more than 15 percent of the nation's population, it is clear that the losses to the economy would be considerable.

Approximately 85 percent of the motor vehicles crossing the Canje River bridge have either their origin or their destination in New Amsterdam, because New Amsterdam functions as the administrative centre for the Corentyne coast and as a regional collection and distribution centre for goods and agricultural produce. Thus, a failure of this essential link in the road network would vitiate much of the benefit to be obtained from an improved Corentyne Road.

**Priority of Road Projects
1966-1972 Development Plan**

<u>Project</u>	<u>Status</u>
Atkinson-Mackenzie	Completed AID Loan.
Georgetown-Rosignol	AID Grant project for initial resurfacing using force account. Approximately half to be improved by AID Loan 010, Georgetown Approaches.
Parika-Vreed-en-Hoop	One half reconstructed under AID grant using force account. 2nd half being completed with force account.
West Bank Demerara	IDA loan being negotiated.
Charity-Supenaam	Under discussion with World Bank.
New Amsterdam-Crabwood Creek	Completed AID Loan.
Crabwood Creek-Little Molasa Creek	Not considered feasible at this time.
New Amsterdam-Mara	Only section to Sisters economically justified. Proposed New Amsterdam loan.
East Canje Road	Proposed New Amsterdam loan.
Parika-Bartica	GOG surveying possible routes.
Canals Polder	IDA loan being negotiated.

3. Alternative Projects AID Might Assist

At the present, there are no new road projects sufficiently matured for AID to make a judgement as to projects economic viability. One project, the Wismar-Rockstone road has been studied but is far less attractive than the project proposed herein. There is, in fact, only one project which has been analyzed to a sufficient degree to permit its consideration as an alternative. That project, dredging of the Berbice River, while indicating a very high level of economic justification does not have now the support of the Guyanese Government.

There is little prospect any project will be ready to be added to a menu of financing possibilities before January 1973. Given this consideration, the history of the proposal herein and its rather high economic viability, the present absence of alternatives should not be a consideration of sufficient merit to delay a decision on the herein proposal.

4. Impact on US Economy

It is believed that the majority of funds provided under this loan will be spent for services and products from the U.S. Certainly as now planned the engineering will be accomplished by the firm which performed the feasibility study and the division of the work is such that a large contractor will be required. Generally speaking, this effectively means a US contractor. Certain supplies, such as asphalt and cement will be procured from Code 941 countries. The amount so expended will approximate 10 percent of the loan.

5. Development of Democratic Institutions

Guyana's Government is increasing its emphasis on self help, stressing the need for cooperative effort to maintain existing infrastructure - such as clearing canals, road building and maintenance, etc., all activities in which the Prime Minister personally participated. Large scale construction projects are not amenable to self help techniques; however, on the "Force Account" work in New Amsterdam, there will be a heavy labor component providing meaningful employment within an area of high unemployment. Considerable opportunities for training and upgrading of skills will exist in all phases of the work adding to the growing body of trained construction personnel. As USAID believes that Guyanese labor will play a major role in the country's political orientation, gainful employment is a necessary factor in the equation.

The effective total highway linkage from Linden (Mackenzie) to Crabwood Creek on the Surinam border should similarly produce in time a cohesiveness of society by facilitating economic and social interchange. Thus, while this project is not a direct contributor to democratic institutional development it has every indication of having a significant indirect bearing on the development of such institutions.

6. Economic Analysis

a) Growth Trends

During the early part of the 1960's, activity was affected by severe civil disturbances leading to a substantial drop in production between 1961 and 1963. Output recovered in 1964 and growth was resumed in 1965. Over the six years 1965-70, GNP at current prices averaged over 8 per cent per year, in comparison to increases of only 3.3 per cent a year in 1961-64. Most sectors of the economy shared in the expansion, but the largest increases were in mining (bauxite and alumina), construction, and government services, while farming and manufacturing grew less rapidly than total output. The rate of increase reached almost 10 per cent in 1967-68, but fell away to about 6 per cent in 1969. Final figures will probably show a growth rate somewhat less than this in 1970. Allowing for an estimated population increase of around 3 per cent a year, per capita GNP rose by less than 0.5 per cent a year in 1961-64 and by about 5 per cent a year in 1965-70. Deflating for price increases, there may have been virtually no real per capita growth in 1970 and 1971. In 1970 average income per capita was approximately \$298 in 1971.

The 1970 slowdown was primarily due to a 15 per cent decline in the volume of sugar production with the important autumn crop interrupted by strikes. In addition, production in the bauxite and alumina industry, which is the largest sector of the economy, was affected by bad weather, and output expanded at a somewhat slower pace than in the preceding year. These factors were partially offset by a sharp recovery in rice production which had declined in 1969.

In 1971, sugar production rebounded with a record crop of nearly 369,000 tons representing an 18 per cent rise over the previous year. But bauxite-alumina output evinced a slower growth rate (estimated at 7 per cent) due to the soft world market which still prevails. Rice production was estimated to have fallen 13 per cent due to heavy rains and flooding, and private investment fell sharply. On the strength of first estimates, the economy as a whole may have grown by about 3 per cent in real terms, or approximately the same level of performance as in 1970.

b) Central Government Finance

The general government sector in Guyana consists of the Central Government, the local authorities, and the National Insurance Fund, together with a few trust funds and decentralized agencies, such as the Guyana Development Corporation and the Guyana Credit Corporation which are arms of the central administration. The public sector also includes a group of six state enterprises, including the Rice Development Corporation, the Guyana Marketing Corporation, the Guyana Electricity, the

Airways Corporation. The Transport and Harbours Department, although part of the Ministry of Public Works, is also included in this group, as its operating revenues and expenditures do not pass through the budget accounts. Recently the Government has acquired several other business concerns including a trading company, a newspaper and a bus company, but the transactions of these firms are not reported separately.

The principal source of information on the transactions of the Central Government is the annual budget document. Data for 1971 are based upon revised estimates prepared before the end of the calendar year, and thus may be subject to quite extensive revision. Debt amortization and sinking fund payments are treated as current expenditure in the budget document, but herein they are treated as a negative financing item.

The operations of the public sector are dominated by the Central Government, which collects 85 percent to 90 percent of current revenues and is directly responsible for a slightly higher proportion of current expenditure. Until recently it also generated almost all of the public sector saving, but following the establishment of the National Insurance Fund in 1970 the proportion was reduced to about two thirds. The Central Government also undertakes either directly or by means of loans and grants to the rest of the public sector more than 85 percent of total public investment.

Of the other general government agencies, the local authorities are responsible for less than 5 percent of total current revenue and expenditure. As indicated above, however, the newly established National Insurance Fund assumed considerable importance in 1970, representing about 7.6 percent of total current revenue and providing 35 percent of financing of the overall deficit. The capital expenditure of these agencies appears to be very small, although information about investment by the local authorities is not available.

The state enterprises play a relatively important part in the economy. Since 1966 their gross trading receipts have fluctuated between G \$47 million and G \$57 million, and in 1970 they were equivalent to about 10 percent of the gross national product. Two or three of the agencies receive regular subsidies from the Government, but as a group they have received small net current account surpluses in recent years. The investment expenditure of these agencies has been quite small, declining from G \$6 million in 1966 to less than G \$4 million in 1967-69. In 1970, however, several new programs were undertaken and outlays apparently rose sharply to G \$16 million. Over the past five years the enterprises appear to have financed more than half of the capital outlays from their current surpluses while loans from the Government have amounted to about 13 percent of the total. The rest of the financing has been obtained mainly from the banks and foreign suppliers.

Expressed as a ratio to GNP, the current receipts of the general government amounted to about 23.6 percent of GNP from 1966 through 1969, but rose to 26.7 percent in 1970 as a result of an increase in the tax revenue of the Central Government and the setting up of the National Insurance Fund. Current expenditure, meanwhile rose from an average 22.7 percent of GNP to 24.6 percent. The current surpluses of the general government rose from the equivalent of .3 percent of GNP in 1966 to about 1 percent in 1967-69 and to over 2 percent in 1970. Meanwhile, public sector investment averaged less than 10 percent of GNP from 1966 through 1970. Taking this into account, the public sector has incurred over-all deficits advancing from 5.3 percent of GNP in 1967 to 7.5 percent in 1969, dropping to 5.9 percent in 1970, and averaging 6.1 percent over the five-year period. In these years some 59 percent of the over-all deficit was financed by net external borrowing, while net borrowing from the banking system was equivalent to about 44 percent.

c) Central Government Operations

(1) Major Trends

From 1966 through 1969 the operations of the Central Government expanded at a pace more or less in line with the over-all growth of the economy (Annex II, Exhibit 7). In 1970, however, both revenue and expenditure increased very strongly, and faster than the economy as a whole. The budget for 1971, which was described as a year of consolidation, provided for smaller increases in receipts and expenditures than 1970, but the scale of operation was expected to remain about the same in relation to the GNP.

Current revenue rose at an average rate of about 9 percent a year in 1967-69, while the ratio of receipts to GNP remained very stable, around 23.6 per cent. In 1970, on the other hand, there were extensive changes in the tax system, and revenue increased by almost 21 per cent, and the ratio of budgetary receipts to GNP rose to 26.7 per cent. The growth of current expenditure was restrained in 1967, and while the rate of increase accelerated somewhat during the next two years, the ratio of current outlays to GNP was slightly reduced between 1966 and 1969. In 1970, however, current expenditure rose by more than 18 per cent, from 23.1 per cent of GNP to 24.6 per cent.

As a result of these trends, current saving which had been less than G\$2 million in 1966 averaged about G\$ 4.4 million in 1967-69, and rose to over G\$ 10 million in 1970, an increase from 0.3 per cent of GNP at the beginning of the period to about 1 percent in 1967-69 and over 2 percent in 1970. Following an increase of 30 percent in 1967, capital expenditure rose only 5 percent from 1967 to 1970.

Outlays in 1971 were probably little if any greater than in previous years, and may have been less. If so, 1971 will be the fourth year of minimal irregular growth in capital development outlays during a period of steadily expanding current expenditures. Over the period 1967-70 current surplus financed only about 14 percent of total capital expenditure. During the immediate post-independence period, the Government also received substantial development assistance in the form of grants from Canada and the United Kingdom, but these receipts tapered off rather rapidly from 1966 onward. Reliance on grant assistance, however, was more than offset by the increased use of external development loans; on a gross basis, drawings against these loans financed about 40 percent of the Government's capital expenditure in 1968-70, against 24 percent in 1966-67. Thus, even though the overall deficit increased substantially from 1966 through 1970, the residual deficit to be financed by internal borrowing or the use of official foreign exchange holdings dropped from G \$17.4 million in 1966 to less than G \$16 million in 1967-68, rose to G \$21.8 million in 1969 and fell again to G \$12.5 million in 1970. Until 1970 domestic borrowing was largely from the banking system. In that year, however, the newly created National Insurance Fund took up more than G \$10 million of government securities, while the private insurance companies are estimated to have taken up a further G \$2.5 million. Thus, total borrowing from the banking system, which had risen from G \$10 million in 1968 to G \$13 million in 1969, declined to G \$8 million in 1970.

1971 Budget: The budget for 1971 provided for a much smaller increase in current operations than took place in 1970. Current receipts were expected to increase by only G \$12 million, or 9 percent, while current expenditure was estimated to rise by G \$6 million (4.8 percent), the smallest increase since 1967. No major new expenditure programs were included in the budget, and the Government expressed the intention of keeping current expenditure under tight control.

Revised estimates presented in December, 1971 indicated a 5.3 lift in current expenditures, while revenue collection fell almost 12 percent. The fall in revenue was attributed mainly to non-receipt of the greater part of income tax from DEMBA owed prior to nationalization. Thus, instead of a current surplus of G \$15 million to be applied to capital expenditure as originally projected, revised estimates pointed to a G \$9.2 million deficit. GOG financial stringencies in the latter half of the year included a cutback in local funds available for foreign development loan projects.

Budget for 1972

GOG will be hard put to realize its target of increasing current revenue receipts 15.5 percent and limiting the growth of current outlays to 6.8 percent as put forward in the 1972 budget. On capital account the budget provides for expenditure of G \$79.4 million, slightly more than last year's appropriations but almost half as much again as probable actual outlays. As in the past, a number of projects are included in the budget for administrative reasons, and it is not expected that they will be fully carried out. The shortfall is likely to affect principally the externally financed projects owing, inter-alia, to a continuing local currency shortage.

ii) Revenue

For some years, the Government has been concerned with increasing efficiency in the various institutions involved in the field of public finance and, to this end, the Government in January 1970 established a committee to improve revenue collection. Although the committee's formal report has not yet been completed, some interim suggestions have been implemented (with regard to, for example, the collection of arrears) which are thought to have been partly responsible for the increase in revenue in 1970. The major part of the increase, however, was the result of a number of measures, involving increases in taxes on corporate profits and property and the imposition of new taxes on insurance companies. The Government has also embarked on comprehensive administrative programs to increase the efficiency of the departments of Inland Revenue and Customs and Excise. The program covering the former department will extend over a three-year period and involves technical assistance from the United States Internal Revenue Service.

iii) Capital Expenditure

Following an increase of 30 percent in 1967, capital expenditure rose only 5 percent from 1967 to 1970. Much of the capital outlays in Guyana in the past several years has been on the provision of infrastructure for community services such as roads, sea and river defenses, development of civil aviation, and other such projects. Such outlays accounted for between one half and three fifths of total capital expenditure in the 1966-70 period. Among the major capital projects completed during 1967-70 were the Atkinson-Mackenzie road, the University of Guyana, and the Timehri International Airport. Investment expenditure on behalf of social services has been relatively small and stable over the past five years. This has also been true for agriculture, except for the rice storage facilities, which became important in 1969 and 1970. Three major projects accounted for virtually all of the projected increase in capital outlays in 1971 and 1972 -- sea and river defenses, rice storage facilities and water supply improvement.

iv) Government Debt

At the end of 1970, total debt of the Central Government amounted to G \$248 million, G \$120 million more or almost twice the size of the debt at the end of 1965. At the end of 1965, internal liabilities accounted for only 30 per cent of the total debt, but over the next five years they rose more rapidly than the external debt and by the end of 1970, represented two fifths of total indebtedness.

Of the internal debt outstanding at the end of 1970, about three fifths consisted of debentures (net of sinking fund balances), somewhat more than one fourth was in the form of Treasury Bills, and the remainder consisted of bank advances and a small amount of savings certificates. Since 1965, some G \$28 million, or 48 per cent of the over-all net increase in internal debt has taken the form of debentures, with the balance of the increase being accounted for largely by Treasury Bills. The largest holders of debentures at the end of 1970 were various government funds, including the National Insurance Fund. Smaller amounts of debentures, in order of importance were held by private industry, commercial banks, insurance companies, the Bank of Guyana, and miscellaneous holders. The distribution of the debt is expected to change considerably over the next few years, with increasing amounts being taken up by the National Insurance Fund and the insurance companies. The large increase in outstanding Treasury Bills since 1965 (accounting for more than 40 per cent of the over-all increase in outstanding debt) has accrued almost entirely to the banking system.

Total debt service of the government rose sharply between 1966 and 1968, but leveled off during the next two years as interest payments rose less rapidly and as a rise in internal debt repayments was more than offset by smaller repayments on external debt. Debt service amounted to 3 1/2 per cent of GNP in 1970.

d) Balance of Payments and External Public Debt

1. Recent developments and prospects

Guyana has had deficits on the balance of payments in four out of the last five years. A heavy deficit in 1966 was largely offset by a surplus in the following year. Since then, there have been three successive deficits with a cumulative total of \$10.8 million. In 1970 the deficit amounted to \$2.3 million, which was substantially smaller than the deficits incurred in either of the two preceding years (Annex II, Exhibit 8) because of a \$ 2.5 million SDR allocation.

1971 evidently saw a balance of payments improvement over 1970. This is predicated on an improvement of about \$27 million in the balance on goods and services. Exports are estimated to have risen by about \$16 million, or 6 per cent, on the basis of recovery in the sugar sector, and increased rice exports stemming from the large autumn 1970 crop. Bauxite-alumina exports dipped below the 1970 level. Imports, meanwhile, remained approximately the same as the previous year as a result of a fall in capital goods imports from their high level in 1970. Lower net inflows (private capital) on capital account was reportedly counterbalanced by repatriation of ALCAN's pension plan funds from Canada and transfer to Guybau's pension plan. GOG also received another \$2.1 million SDR allocation.

2. International reserves

The foreign reserves as shown in Annex II, Exhibit 9, include the net foreign assets of the banking system and certain foreign balances held by or under the management of the Government. Most of the reserves--\$20 million on December 31, 1970-- are held by the monetary authorities, but about \$7 million was held on the same date by the various government funds. The most important of these are the sinking funds against the government internal debt, which at the end of 1970 held \$4.5 million in foreign assets. (Note: Balances held in funds against the external debt are not freely available for meeting international payments and consequently are not included in the net international reserves--they are instead treated as an offset to the

Government's outstanding external debt). The commercial banks sold most of their reserve assets to the Bank of Guyana in 1968, since when they have held net debtor positions, but the Post Office Savings Bank still holds some assets abroad. The total level of reserves at the end of the year was equivalent to two months' imports at the 1970 rate.

Over the past five years, Guyana's net reserve position has declined by \$18.2 million, reflecting a cumulative balance of payment deficit of \$13.1 million and a reduction in the U.S. dollar value of Guyana's sterling holdings as a result of the devaluation of sterling in November 1967. The cumulative decline in reserves over the three years through 1970 was \$10.8 million. Of the reserve decline, \$9 million was in the accounts of the commercial banks, \$1.1 million in those of the Government, and \$2.2 million in the foreign assets of the Post Office Savings Bank; the monetary authorities, meanwhile, increased their reserves by \$1.5 million.

3. Merchandise Trade

i) Exports

Between 1960 and 1970, Guyana's exports rose from \$75 million to \$133 million, or at an average annual rate of 5.9 per cent. (See Annex II, Exhibit 10). The rate of growth was faster in the first half of the decade than in the second--7.6 per cent a year compared with 4.3 per cent. The production of sugar and rice for export in 1962-64 was seriously affected by the civil disturbances of those years, but this was largely offset by the very rapid initial expansion of output in the newly established alumina industry. Between 1966 and 1970 agricultural exports stagnated while bauxite and alumina exports rose \$24 million. Bauxite, alumina, sugar and rice together accounted for almost 83% of exports in 1971. The volume of sugar exports increased strongly by 17% in 1971 and obtained preferential prices in both the UK and U.S. During the period 1965-70, bauxite-alumina increased their share of total exports from 38% to 53%. However, due to the soft world market there was a reduction in 1971 in the export volume of these two products, only in part compensated by price increases (of 14%) for calcined bauxite. The net result was a decline of 2.9% in sales volume. Consequently, exports of bauxite and alumina accounted for only 43% of exports in 1971.

4. External Public Debt

Interest rates on most of the United States loans have been below 3 per cent, while all the Canadian loans have been interest-free. Moreover, these loans have in general involved extended grace periods and terms to final maturity in contrast to the United Kingdom loans which constituted virtually all of Guyana's external debt at the end of 1965. Thus, it appears that the maturity profile has improved in recent years.

At the end of 1971 the external public debt of Guyana amounted to approximately US\$137 million. The outstanding debt had not risen much over the few years prior to 1968 but subsequently rose by about US\$20 million in 1969-70 and by US\$61 million in 1971. The steep rise in 1971 is largely the result of the nationalization of DEMBA. Excluding the obligation to ALCAN, at the end of 1971 the rest of Guyana's external public debt of \$89.4 million consisted for the most part of project loans received by the Central Government and public corporations under government guarantees. About one-half of these obligations were to the UK and part of the balance (\$25 million) to the U.S. Outstanding obligations on IBRD-IDB loans were small.

Debt service payments in respect to the direct external indebtedness of the GOG are expected to increase in 1972, as the first installment on the debt to ALCAN for the nationalization of DEMBA will fall due at the end of December 1972. (In 1971 GOG debt service payments amounted to US\$4.4 million, or only 1.6% of total GNP and 2.7% of total exports. In 1972 the total debt service is set at approximately US\$8.7 million or 3.2% of GNP and 5.4% of exports, double that of the 1971 debt service burden.) On the basis of outstanding commitments at the end of 1971, debt service payments are projected to continue rising--though slowly--for a number of years. The highly concessionary terms on which Guyana obtains external assistance have contributed to the relatively low debt service ratio. In 1971, the outstanding debt carried an average interest charge of 4 per cent, while the average life of loans was about 24 years. No change in these terms is imminent. By 1977 the total debt service is projected at approximately US\$10.2 million with a debt service ratio (percent of GNP) of 5.8 per cent, a proportion which should not give cause for concern. The debt service burden should remain within manageable bounds at least until 1980.

5. Other Creditworthiness Considerations

On July 15, 1971 Guyana nationalized the Demerara Bauxite Company (DEMBA), a subsidiary of the Aluminum Company of Canada. The successor company is the Guyana Bauxite Company (Guybau). Shortly before Vesting Day, the Government and Alcan reached a negotiated settlement for compensation whereby the Government will pay Alcan G\$107 million over a period of no more than 20 years with interest set at six per cent subject to withholding tax for an effective interest rate of $4\frac{1}{2}$ per cent.

The GOG conducted an intensive public relations campaign to impress on the general public, and the bauxite workers in particular, the need to maximize production and efficiency, and hold costs in line. The theme: bauxite is the true backbone of the economy, and if bauxite fails so does Guyana. To minimize the possibility of inept management, the Prime Minister has announced emphatically that Guybau will be an independent public corporation, devoid of political patronage and run on a profit making basis. Performance will be the criteria for continued employment by management. The senior staff, which includes expatriates, is considered generally adequate, though some weakness remains in the Mining Division. Nevertheless, nationalization was accompanied by a slowdown in dried bauxite production and a drop in export receipts for 1971, the latter owing to a worldwide soft market for alumina and metal grade ore.

Effective the beginning of 1972, Phillip Bros., a subsidiary of the U.S.-owned Englehard Minerals and Chemical Corp., was appointed as Guybau's exclusive marketing agent under a three year contract. Marketing prospects appear uncertain for a substantial portion of alumina and a lesser amount of dried bauxite production capacity. However, Guyana's position as virtually the world's only producer of refractory calcined bauxite assures continued demand for this product. Over the longer term, Guybau intends to emphasize production of calcined bauxite through a major expansion of calcining facilities.

Despite marketing problems, Guybau appears to be operating at a profit and is meeting its financial obligations by repaying loans granted by foreign banks to provide initial working capital following the takeover from Demba.

6. Conclusion

For the short run it appears the GOG will continue to experience a local currency problem. However, in view of the priority of this program, we do not anticipate the situation to adversely effect the implementation of the project. To ensure that local funds will be available a condition relative to fund availability will be included in the Loan Agreement.

During the past two years there has been a slowdown in economic growth, a somewhat poorer fiscal performance and increased pressures on the balance of payments. The setback in sugar production and export which occurred in 1970 was reversed in 1971 and the industry is currently benefitting from a preferential U.S. and UK market as well as higher world market prices. The prospects for agriculture should continue to improve as sugar acreage is increased and as investments in rice establish a basis that will permit an expanded exportable output. The outlook for the bauxite industry is less certain. Guyana currently enjoys a near monopoly position in calcined bauxite, which accounted for approximately 42% of the value of Guyana's bauxite/alumina sales in 1971. There continues to be a relatively strong demand for calcined

bauxite and GUYBAU in 1972 should achieve full benefit from the 14% increase in selling price registered last year. The outlook for metal grade bauxite and alumina, of which Guyana is a high cost producer, remains to be determined. However, marketing arrangements for 1972 and 1973 have been made covering the sale of approximately \$48.5 million of Guybau's output for 1972 and 1973. This is equivalent to 72% of 1971 sales. Currently the world-wide supply of these products exceeds demand and substantial additional world capacity is scheduled to come on stream over the next two years.

Until the savings of public enterprises can compensate for the impaired growth from the private sector, the GOG will find it more difficult to obtain the domestic resources for financing the sharply expanded government participation in the economy. However, the current commitments from multilateral and bilateral assistance agencies will provide substantial resources to the Guyana economy.

The level of external debt servicing, while substantially increased over 1971, remains within manageable bounds. If future assistance continues to be offered on highly concessional terms, the debt servicing requirements should not become significantly more burdensome during the rest of the decade. The projected external debt servicing requirements, through at least 1980, are within accepted standards.

7. Mission Director's Certificate

A copy of the Mission Director's Certificate attesting the satisfactory performance by the Borrower with respect to previous AID loans and the Borrower's capability of implementing the loan proposed herein, is contained in Annex I.

SECTION II: PROJECT ANALYSIS

A. BORROWER

1. Principal and Participating Entities

The Borrower is the Government of Guyana. The Minister of Finance will sign the Loan Agreement on behalf of the Government. The Ministry of Works, Hydraulics and Supply will be the implementing Ministry and within that Ministry the project will be controlled by the Roads Division.

The Minister of the Ministry of Works, Hydraulics and Supply will be responsible for all matters pertaining to the signing of construction, technical assistance and related contracts, financed by the loan. The Chief and Deputy of the Roads Division are to be responsible for (1) all matters pertaining to the preparation of final plans and specifications, (2) assisting in the preparation of bid documents and carrying out bidding and award procedures, (3) supervising construction and certifying payments for contractors pursuant to the loan, and (4) supervise and certify for the technical assistance services to be provided for construction, supervision and material procurement, and (5) planning and supervision of work to be performed by "force account".

The actual day-to-day administration of the contract will be under the Roads Division of the Ministry of Works, Hydraulics and Supply.

The Roads Division will assign technical personnel from its staff to assist the Consultant in design and engineering supervision of construction. This Division will be directly responsible for the construction to be done by force account. This will be done by awarding various sub-contracts for the construction of drainage structures and hauling of materials with the Ministry force doing grading and asphalt pavement work.

Other entities which will be involved in the execution of the project are the Ministry of Finance and External Trade Bureau. The Ministry of Finance's role is, subsequent to signing of the Loan Agreement, to request the issuance of Letters of Commitment and to establish Letters of Credit utilizing both AID and GOG funds. The External Trade Bureau (ETB) role will affect the force account contractors.

ETB is a state trading operation and we assume all offshore procurement such as cement required for force account work will be procured through the ETB. No problems are anticipated as a result of the involvement of these two governmental units.

2. Organization and Management of Implementing Agency

The Roads Division of the Ministry of Works, Hydraulics and Supply is headed by a Chief Engineer; he reports to the Chief Officer of the Ministry of Works, Hydraulics and Supply, who in turn reports to the Minister in charge. The organization is very similar to comparable political subdivisions in the U.S., having similar responsibilities. The Chief Works, Hydraulics and Supply officer capably delegates his responsibilities, retaining such administrative control as to effectively manage his responsibility. The Chief Engineer of the Roads Division is supported by capable and experienced heads who control, operate and manage each of the various services required.

An organization chart of the Ministry of Works, Hydraulics and Supply and for the Roads Division, is shown in the Annex II, as Exhibits 12 and 13 respectively.

The Heads of the Sections, and the Chief of the Roads Division are all highly trained, experienced and technically qualified to perform their responsibilities. There is some shortage of technicians below the level of section chiefs because of the non-availability of this type of qualified personnel in Guyana. The University of Guyana has implemented a course of study whereby training is given to produce technical skills in various descriptions of engineers below the level of professional engineers.

The Supply function of the Government was recently added to Ministry of Works and Hydraulics. This gives that Division more latitude in controlling the supplies for all Divisions. This is especially helpful to the Mechanical Division in its control of spare parts for the repair and maintenance of the equipment and used by the Roads Division in the construction and maintenance sections.

The Mechanical Division is in the process of some reorganization with the advice and assistance of U.K. specialists. The repair of equipment and maintenance of spare parts is still a problem, but has improved considerably during the past year.

The Government is aware of the problems and is actively searching and trying to bring about changes to improve, within their financial capabilities.

The Maintenance section as shown in organization chart consists of nine (9) principal districts; each is headed by a District Engineer or District Superintendent. Two of the districts each has two sub districts.

Each district is furnished with the basic equipment needed to perform the routine maintenance work. Extra equipment is provided to the districts from a central pool for extraordinary type of projects.

It is not considered necessary that any specific conditions be included as covenants to loan in the field of management or organizational structure. The past performance has indicated that the Government has the capability to manage and execute the project in a successful manner.

The feasibility study including preliminary plans and cost estimates has been completed by the Consulting firm of Parsons, Brinckerhoff, Quade and Douglas. It is proposed that a consulting engineering firm will be retained to prepare final plans, specifications and contract documents for the bridge; the highways to be constructed or reconstructed. This firm will be selected by the Government. This plan will be done largely through the Consultant's U.S. personnel, supplemented by local hire personnel. The Roads Division will maintain administrative control, review and approve work performed and provide some logistic support to the contractors.

Likewise, the consulting engineering firm will be retained to supervise construction of all contract and force account work. The Consultant will provide the key personnel and the Ministry of Works, Hydraulics and Supply will provide technicians to support the Consultant's staff such as surveyors, field inspectors, materials testing and sampling personnel. The facilities of the Ministry of Works, Hydraulics and Supply, soils and materials testing laboratory and personnel will be made available for all materials testing.

The detailed organization has not been defined, but the pattern will be the same as in effect on the construction of the Corentyne Highway. The cost of providing consulting services will be from the loan funds.

3. Capability of the Ministry of Works, Hydraulics and Supply to handle Force Account

The Ministry will be required to construct over a three year period, approximately U.S. \$ 4.0 million dollars worth of improvement. These improvements will consist of the three road section and numerous short street sections within and adjacent to New Amsterdam. This construction would represent an expenditure of approximately U.S. \$647,000 to \$2.14 million per year.

The Ministry has demonstrated substantial capabilities in street construction using subcontractors for structures (bridges and drainage culverts) with the Ministry force doing the placing of materials and surfacing. The Ministry during the past five years has completed several substantial projects. The principal ones include:

- 1) Resurfacing the highway from Georgetown to Soesdyke, approximately 20 miles.
- 2) Resurfacing the highway from Georgetown to 6 miles beyond New Amsterdam, approximately 50 miles.
- 3) Resurfacing the West Coast Road from Vreed-en-Hoop to Uitvlugt, 10 miles.
- 4) In process of reconstruction of the road from Uitvlugt to Parika, 10 miles. This road is for the most, a new realignment, and is scheduled for completion in August 1972. The asphalt payment is now being placed.
- 5) Construction of approximately 40 miles of a new road (dry weather) from Mahdia to Annai. This road passes through a heavily wooded area and difficult terrain. In addition to Ministry crews, self-help groups were organized to assist in clearing and other manual type of labor. The self-help crews cleared the entire length of the road to the full right-of-way width. They have now removed and plans are underway to initiate similar work on the Wismar to Rockstone to Potaro trail route. The Guyana Defense Force as a civic action program with equipment furnished by the United Kingdom, have commenced grading operations on the road. Considering the magnitude of this project and difficulties in terrain and accessibility, the Government has done a remarkable job. Although there is much work yet to be done, the Government has demonstrated its ability to unite the people for the accomplishment of common goal through voluntary efforts.

6) The reconstruction and extension of Kelly Dam road from Camp Street to Vlissingen Road. This road will be completed during April as the final pavement course is now in process. The road is actually a part of the plan prepared by Parson, Brinckerhoff, Quade and Douglas for the Improvement of Georgetown streets but because of urgency of the construction of the Seawall adjacent to road and the closing of the existing road, the Ministry forces undertook this project, the cost of which is financed under the Seawall loan. The estimated cost of this section as included in the PBQ&D study is approximately US\$275,000 if done by contract. The job was commenced November 1971.

7) There have also been many minor realignments and community type streets improved and constructed.

To the extent that the Ministry will use local contractors, there appears to be several qualified contractors available for this type of work. The Guyana Rice Corporation is constructing concrete foundations for six rice storage centers (A.I.D. Loan 504-L-008) and using local contractors for this work. Bids received for each of the sites have received approximately ten qualified bidders. The cost was around G\$200,000. The jobs are nearing completion and the working has been of good quality and was performed effectively with a minimum of problems and delays.

The rice project is now nearing completion and this contractor will be available for additional work.

The amount of work however by sub-contractors on this New Amsterdam project will be relatively small because sub-contractors will be used principally for concrete work and hauling of materials. There will be very little concrete work and the hauling of materials is done for the most part on a rental basis. There are many small owners who participate plus a few larger operators who have several trucks. The sub-contractor (Hack Bros) for Enkay Constructores on the Corentyne project, was able to acquire a fleet of 7-8 cubic yard International Dump Trucks which are now available for additional jobs and are ideally suited for the work at New Amsterdam.

The Ministry has indicated a willingness to let all of East Bank Road (Georgetown-Soesdyke) be constructed by offshore contractors, thereby releasing the Craig-Soesdyke portion from Force Account in exchange for doing the New Amsterdam streets and approach roads on a Force Account basis. This will actually result in about the same amount of force work to which they are presently committed. Furthermore,

it would restore the balance of Force Account vis-a-vis Contractor work as originally agreed when the New Amsterdam work was to be included in the Georgetown project.

The New Amsterdam streets and approach roads lend themselves to Force Account because the construction is light and the equipment available to Ministry is best suited for this work. In fact, the Consultant in the preparation of the feasibility recommended that this work be done by Force Account.

It should be emphasised that under this proposal there will be no added load to the Government Force projects than what now exists. It will in fact be more beneficially distributed.

The Consulting Engineer will supervise the construction of all force account as well as foreign contract works.

The Ministry has given assurances that they can and want to do this work, and their past performance indicates a reasonable assurance that they have capabilities to perform to the extent required under this proposed loan.

B. ENGINEERING FEASIBILITY

1. Studies

The engineering firm of Parsons, Brinckerhoff, Quade and Douglas has completed a detailed feasibility study of the project under consideration which included preliminary plans, economic feasibility, cost estimates, traffic demands and a consideration of alternates. The plan was coordinated with the Municipality of New Amsterdam and provides for facilities to meet the highway needs to year 1990 with the recommended construction projects meeting the needs for the next five years.

The user-benefits to cost ratio have been computed for the separate units of construction. All roads proposed for construction have user-benefits greater than costs. The benefits to cost ratio are shown in Section C, Economic Analysis below, and varies from 2.14 for the East Bank Berbice Road to 3.41 for the Canje River Bridge, using a discount rate of 10 percent. The internal rate of return varies from 21 percent to 37 percent.

2. Cost Estimates

Cost estimates based on unit quantities have been prepared for each of the projects proposed. The cost estimates were prepared in accordance with M.O. 1223.1 dated August 1968, and checked and adjusted to conform with recent experience in Guyana. The cost estimates were prepared on the basis of a foreign Contractor and by Government Force Account. The Roads Division of the Ministry of Works, Hydraulics and Supply furnished the latter costs on the basis of their cost records for previous jobs.

The Government when doing a Force Account job, sub-contracts with local contractors for concrete and wooden bridges and structures and uses private truckers for the hauling of all materials. Local Contractors are not equipped with graders and rollers for placing the material, nor do they have asphalt placing equipment. Commercial supplies of bitumen are not stocked in the country. Sources and availability of raw materials were investigated. Available in-country are mineral aggregates consisting of crushed stone of all gradations from quarries along the Essequibo River and reef sand from natural deposits commencing in the vicinity of project. All other required materials will be imported from the U.S. or a country of the 941 Code. This includes cement, bitumen, all classes of steel, iron products, equipment, spare parts, fuel and lubricants.

3. Engineering Plans for Execution of the Project

a) Plan Preparation

After the Government of Guyana and the Government of the United States have entered into the required Loan Agreement, a Consulting Engineering firm, selected and qualified in accordance with the requirement of M.O. 1442.1, will be employed by the Government of Guyana to prepare final plans, specifications and contract documents.

The firm selected will have the complete responsibility for this project and will be required to furnish, either locally or from their home office staff, all the engineering skills required. It is not anticipated that any waivers will be required in this phase of the work.

The plans and technical specifications will be prepared for all projects, irrespective of whether it is to be constructed by Force Account and local contractors, or offshore contractors. The General Provisions of the specifications and contract documents will be varied to fit the method by which the work is to be done.

A schedule of the engineering design and construction work has been prepared and is included in Annex II, Exhibits 14 and 15. Since the project is divided into several sub-projects, the engineering schedule is shown separately for each of the sub-projects. In general, all plans, specifications and contract documents would be completed one year after the Consultant is authorized to commence work.

b) Construction

The total project would be divided between foreign contractors and Government Force Account. Local subcontractors will do all concrete and timber structure work and all materials hauling; the rest will be done by Ministry personnel. The Government will do by Force Account, all streets within New Amsterdam and the three approach roads.

The breakdown between Force Account and Foreign Contractors effort is as follows:

<u>Force Account</u>	<u>Miles</u>	<u>U.S. \$</u>
1. East Bank Berbice	6.2	905,000
2. West Canje Road	3.1	355,000
3. East Canje Road	8.6	680,000
4. New Amsterdam Streets	1.7	260,000
Total	19.6	\$2,200,000

Foreign Contractor

1. Canje River Bridge and Approaches	-	1,800,000
Total Contract and Force Account	19.6 miles	\$4,000,000

The contract for work to be done by foreign Contractors, U.S. or Code 941, will be awarded in accordance with the latest revision of M.O. 1442.1 (A.I.D. Capital Projects Guidelines - Borrower Procurement of Construction Services). The proposed projects will be advertised in the Commerce Business Daily, bidders will be prequalified, sealed bids on the basis of unit prices will be received from previously established qualified bidders, and the bid awarded to the lowest responsive and responsible bidder. The successful bidder will be required to furnish all labor, equipment, materials and supervision, in accordance with established AID regulations, to complete the work in accordance with the plans, specifications and contract documents.

Payments to the foreign contractor on Canje Bridge will be made under normal AID procedures. AID loan funds will be paid in US dollars to the contractor up to the amount of the contractors foreign costs. Payments for the direct dollar costs for the engineering consultant will also be made under normal AID procedures.

For work performed by either local contractor or by Force Account, the consultant will submit a monthly statement as to the units of work performed. Reimbursement will be made against the units of work performed at the agreed unit prices. AID will reimburse each voucher in a proportion determined in accordance with the procedure noted on p. 45a, last paragraph. No cost escalation is provided. The only change permissible to the above is a maximum increase of 10 percent in the number of units at the agreed unit prices. The Consultant will certify the correctness of work performed and the appropriate documentation will be submitted to USAID, monthly, for payment.

c) Time Table

The Consultant has estimated that construction should be completed in thirty-two months after authorization to start the final engineering. This schedule does not make allowance for the rainy season, which will affect the construction by extending the time up to 33%, dependent on the actual time of year when the construction commences. It is estimated that a maximum additional allowance of twelve months should be made for delays due to rains. Final completion could then require as much as forty-four months.

d) Maintenance

Maintenance operations on the road system in Guyana are performed by the Maintenance Section of the Roads Division of the Ministry of Works, Hydraulics and Supply. The Specialist Engineer, Maintenance, is responsible for this activity and reports to the Assistant Chief Engineer, Roads Division.

The country is divided into ten maintenance districts: (1) East Berbice, (2) West Berbice, (3) East Demerara, (4) East Bank Demerara, (5) West Demerara, (6) Essequibo, (7) Interior, (8) Georgetown, (9) Rupununi, and (10) North West District. The last two districts are administered by District Engineers and Superintendents. These administration supervisors are responsible to the Specialist Engineer, Maintenance, only for the road maintenance portion of their activity.

In general, the maintenance groups consist of a pavement unit and an asphalt unit. They vary from one district to another, both in personnel and equipment, depending upon the needs. In addition, there are three mobile asphalt batching plants - two with a working capacity of fifty tons each per hour and the third with a thirty ton capacity. Annex II, Exhibit 16, shows the list of personnel and equipment during 1971 for the six major districts. The maintenance work in Georgetown is performed under the direction of the main office of the Roads Division.

Exhibit 17 of Annex II shows the annual expenditures for road maintenance during the past nine years. The figures represent available funds for maintenance rather than the amount that was actually needed, the actual allocation generally being less than the originally requested. The difference between requested and approved funds are listed for 1966 to 1970 in Annex II, Exhibit 18.

In past years, some funds allocated for road maintenance have been utilized for other general fund purposes in the districts, which has reduced road maintenance efficiency. A recent account and reporting procedure has been established within the Roads Division to ensure that all funds are spent on road maintenance. Annex II, Exhibit 19, indicates the present projected expenditures for road maintenance from 1972 through 1974.

The UNDP through a \$700,000 grant, with the IBRD as executing agency, will be financing a management study of the Ministry of Works, Hydraulics and Supply. This study will primarily concentrate on the Highway Division and the Maintenance Section. The study will include all aspects of the organization including procedures, personnel, equipment and the organizational structure of the various sections. After completion of the study, personnel will be provided to assist in the implementation of the study. In addition to the management study the UNDP will provide funds for the establishment of a transportation unit in the Ministry of Economic Development. This unit will be a planning group to identify and establish priorities for all transportation projects.

The present maintenance as now provided is generally of an acceptable standard. The roads which have been financed by AID loans have received good maintenance. The Atkinson-Mackenzie highway has a full time maintenance crew and high level of maintenance has been maintained since completion. The Corentyne highway, recently completed, will similarly have a maintenance crew assigned to it. Both roads operate as toll roads and funds received from tolls are used to support maintenance expenses.

Other major highways, similarly maintained include East Coast, East Bank, West Coast and West Bank. Some secondary roads which have been poorly constructed are maintenance problems which can probably only be solved by strengthening of the structural section.

The maintenance cost for the New Amsterdam Approaches and city streets is estimated at G\$2,500 per mile. This figure is based on an analysis of the 1969 maintenance expenditures.

The improvement of roads included in the project will actually reduce the maintenance requirements by constructing the existing roads to a higher structural standard. Since all of the roads are main highways, there is no problem anticipated in the future maintenance of them. The Ministry of Works, Hydraulics and Supply has an organization and equipment capable to properly maintain the project. The roads to be improved are all existing routes.

e) Monitoring

There is presently assigned to the Mission staff, two direct hire U.S. Engineers. They have monitoring responsibilities on all engineering construction projects. There are presently three large projects under construction, namely, Rice Modernization Loan, Georgetown Approaches and Water Supply. The Corentyne highway was completed this year and relieved some of the present workload.

It is believed that the present staff will be able to carry out the USAID/Guyana monitoring responsibilities on this project.

f) Appraisal of Technical Soundness

The highway projects will be similar to other existing highways in Guyana, no new techniques or methods will be employed.

The highways will be constructed in coastal regions and riverain areas surrounding and adjacent to New Amsterdam. These are low lying areas below the level of high tide and protected by dikes along the river banks. The soil is generally soft clay containing high moisture content near the surface and increasing in stiffness as a function of depth. The top few inches has been formed into a humus type of soil through vegetation growth and decay.

The roadway surface will be constructed on an embankment fill sufficiently above the existing surface of land to protect it from flooding and permit passage of surface drainage. Where embankment is required it can be obtained by excavation of adjoining areas, it

will require considerable time to dry out in order to reach a moisture content which will permit an adequate compaction to support the wheel loads. This drying process can be accelerated by aeration, by discing and working the fill material. The decision as to whether to use imported (borrow) reef sands as embankment or excavate adjacent soil will depend on the economics and will be decided during the preparation of final plans.

Standard types of equipment will be used, the foreign contractor will probably import his own equipment. The local contractors and highway department will use their existing equipment which for the most part is either of U.S. or U.K. manufacture.

Cement, reinforcing steel and bituminous products will be imported. The cement and bitumen will most likely be supplied from Trinidad source and the rebar from U.S. source. However, supply from the U.S. or any 941 Code country will be eligible.

Adequate supply of rock is available from the quarries along the Essequibo, but will have to be crushed, graded and barged to an unloading point near the project.

Some additional right-of-way will have to be acquired and a few improvements purchased or relocated to accommodate the proposed road sections. This will be done independently by the Ministry of Works, Hydraulics and Supply and will not be financed from loan funds. A major portion of the project will be constructed within existing road reserves. Some relocation of utility lines will also be required to clear the right-of-way for construction. The local contractors and the Government forces will secure their material either through the ETB (External Trade Bureau) or the local suppliers who import it. The ETB is controlling the imports of certain critical types of materials. Cement has recently been in short supply to local contractors and foreign contractors working on the sea defence. This is allegedly due to procurement problems in the source country and the newly adopted procedures of the ETB. This will undoubtedly be corrected shortly and should not be a problem in the project.

Compensation to home owners (estimated to be five) will be made in accordance with Chapter 179 entitled Acquisition of Lands for Public Purposes, under The Laws of British Guiana. A copy of document is attached in Annex II, Exhibit 20. In essence, the practice of the Government is to compensate the owner of tangible property, excluding land, but including structures and crops, providing the Government has land of equal value in the vicinity. If such land is available the Government will also move the structures if possible. If no land is available the Government may compensate the land owner when there is hardship involved. The basic law has been modified as is clear from examination of Exhibit 20 and current practice. However Exhibit 20 does provide the reader with a basic idea of the GOG's compensation practice.

Other than those mentioned, there are no unusual technical problems foreseen.

g) Basis of Cost Estimates

There has been sufficient work of the same type done in the country which gives a good basis for comparison of costs. The Consultant also considered other recent foreign jobs where conditions were similar. He also investigated the cost of local labor and current prices for materials and equipment which would be required to complete the project. The estimates furnished are believed to be reasonable and of sufficient accuracy. The total costs include an overall figure of 5% for escalation of labor and material costs and 10% contingency reserve to cover unforeseen conditions that arise. Force Account estimates are based on records supplied to the Consultant by the Ministry of Works, Hydraulics and Supply. These costs have not been independently verified, but the Ministry has vouched as to the reliability of the estimates.

h) Engineering Conclusion

It is concluded that the proposed plan is technically feasible, well planned, and can be executed in accordance with the plan set forth herein.

C. ECONOMIC EVALUATION

The economic evaluation of this project is based on the same feasibility study as Loan 504-L-010 "Improvement of Georgetown Streets and Approaches". That study was transmitted to the GOG under date of December 20, 1970. It is not known to what extent economic costs may have been altered by inflationary price movements since that date, but it seems reasonable to assume that such cost increases would be substantially offset by inflationary increases in imputed economic benefits, particularly since those benefits are so closely linked in this project to wage rates, which are presumably a fairly faithful reflection of price movements in Guyana.

1. Internal Rate of Return Analysis

The project is made up of 5 sub-projects, each of which has been subjected to benefit-cost analysis at opportunity costs of capital of 10 and 12 percent. All proved feasible by substantial margins, with internal rates of return ranging from 21 to 37 percent, far exceeding the highest opportunity cost considered appropriate for a public works project in Guyana.

Benefit calculations were limited to those anticipated from projected user savings alone, neglecting entirely any returns which might accrue to the economy from productivity induced by the proposed road improvements.

The present value of projected benefits to the economy over the assumed life of the project (ending 20 years from completion of construction) discounted back to the date of first disbursement (taken here to be in 1972) were compared to the present value of the anticipated stream of costs for construction and maintenance over the same period, identically discounted. The benefit-cost ratios and internal rates of return which resulted from this process are:

<u>Sub-Project</u>	<u>10%</u>	<u>12%</u>	<u>IRR</u>
1. East Bank Berbice Road	2.14	1.82	21 percent
2. West Canje Road)	2.40	2.04	25 "
3. East Canje Road)			
4. New Amsterdam Streets (Subsumed equally between 1 & 2 + 3 for economic evaluation)			
5. Canje Bridge Replacement	3.41	Not Calculated	37 "

In the feasibility study of the New Amsterdam Approaches and the Canje Bridge, the benefits claimed are confined to savings to users in time and operating costs. These savings are a direct contribution to the national economy and are found to exceed substantially the cost to the economy of making the improvements.

2. The approach roads and the bridge serve a city whose economy is a substantial part of the national economy. The proposed investment is directed to improvement of existing roads and is not expected to change significantly the transport corridors being served. It is not expected to cause essential changes in existing land use, production, or traffic patterns. For these reasons, induced productivity benefits, over and above user savings are not claimed for the project.

3. Economic Conclusions

The feasibility study of this project, performed by a reputable U.S. transportation consulting firm, has been examined in some detail. The assumptions and conclusions of the study appear reasonable, and methodology seems to be of the type currently applied to transport projects of this kind.

The report's forecast of returns well in excess of marginal expectations for the application of capital in Guyana indicates that this investment should be undertaken.

See Annex II, Exhibits 21 through 26, for tabular presentation of data underlying benefit-cost calculations.

D. FINANCIAL ANALYSIS

1. Funding Requirements

The total cost of the project is U.S. dollar equivalent of \$4,000,000 distributed as follows among the several sub-projects:

Force Account

	<u>Miles</u>	<u>U.S. \$</u>
1. East Bank Berbice	6.2	905,000
2. West Canje Road	3.1	355,000
3. East Canje Road	8.6	680,000
4. New Amsterdam Streets	1.7	260,000
Total	19.6	\$2,200,000

Foreign Contractor

1. Canje River Bridge and Approaches		1,800,000
Total Contract and Force Account	19.6 miles	\$4,000,000

The above total estimated costs include 15% for Engineering and Supervision, 10% for Contingencies and 5% for Escalation. Additionally, the total estimated cost includes all charges to the project even though such charges may represent transfers within the economy in the form of imports, etc. For purposes of economic evaluation, the estimated amount of these charges were subtracted from the final cost estimate.

2. Application of Funds

The planned financing sources of the project and their respective time phased revenue are as set forth. The schedule represents the targets established by the GOG and their Consultant.

<u>Source</u>	<u>Calendar Year</u>			<u>TOTAL</u>
	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	
AID	\$ 904	\$1,613	\$ 483	\$3,000
GOG ^{1/}	301	535	164	1,000
TOTAL	\$1,205	\$2,148	\$ 647	\$4,000

^{1/} In U.S. Dollar equivalents

This schedule appears optimistic as is noted in the engineering evaluation. A possible extension of twelve months due to rainy season work stoppages is possible. The AID loan of \$3.0 million represents 75% of the total project cost, while the GOG contribution of \$1.0 million makes up the remaining 25%. These percentage breakdowns correspond closely to those of two previous road projects--the Mackenzie and Corentyne Roads--for which A.I.D. financing was made available.

In response to the Regional Review Committee's request relative to the level and type of local currency financing to be accomplished under the project, a cost attribution has been prepared to indicate the allocation of project costs to direct U.S. dollar costs and local currency costs. This tabulation subdivides local currency costs into two distinct categories: indirect foreign exchange (FEX) expense and expenditure for items of Guyana source and origin. The latter costs are essentially for sand, labor and wood while the indirect FEX costs are comprised of (a) materials to be imported and incorporated in the works and (b) consumables and depreciation of equipment utilized in the construction of the works but not incorporated in the works.

SubProject	Total Cost	Direct Dollar Cost	ALLOCATION OF EXPENSE		Expenditures Guyana Source & Origin
			Local Currency		
			Incorporated in Works	Consumed	
New Amsterdam Streets	\$260,000	\$36,000	\$96,300	\$65,000	\$62,700
East Bank Berbice	905,000	121,500	222,795	226,200	334,505
West Canje Road	355,000	48,000	116,510	90,000	100,490
East Canje Road	680,000	92,000	226,720	170,000	191,280
Canje River Bridge	<u>1,800,000</u>	<u>1,572,000</u>	--	--	<u>228,000</u>
TOTALS	\$4,000,000	\$1,869,500	\$662,325	\$551,200	\$916,975
	100%	46%	17%	14%	23%

AID loan funds will be disbursed through the letter of commitment procedure for the engineering consultant's FEX costs and the dollar costs of the foreign contractor selected to demolish and construct the Canje River Bridge. The engineering costs were calculated as a percentage of the value of the work to be performed on the four road projects and in turn allocated to expected FEX costs (90%) and costs reflecting Guyana source and origin (10%). Engineering supervision costs and the FEX costs of the Canje Bridge sub-project are based on the feasibility study report. The total direct dollar costs of these two contracts is expected to be \$1,869,500.

The indirect FEX costs are shown in two columns. Under "Incorporated in Works" are included those materials, primarily bitumen \$269,000 and lime \$356,000, which normally are imported by either the GOG's state trading organization, the External Trade Bureau, or commercial importers and purchased from either source by the MWHIS and local contractors. Although it is anticipated the normal procedure will be employed, discussions are underway to ascertain the feasibility of importing the lime and bitumen under direct dollar financing. The difficulty of bulk procurement, which must be resolved if direct financing is employed, centers on the potential of the lime hydrating under Guyana weather conditions and storage of the two types of bitumen. The "POL Maintenance Depreciation" column represent costs associated with the use of equipment. These costs are expected to approximate \$551,200 or about 25% of the four road sub-project's cost.

True local costs, representing Guyana source and origin, are comprised of expenditures for reef sand, fill, labor and wood. These costs are estimated to be \$916,975 or 23% of the cost of the project.

This rather high percentage (77%) of direct and indirect foreign exchange reflects the smallness of Guyana's economic resource base. Previous experience on AID loan and grant funded highway projects in Guyana has shown a 70-80 percent foreign, or import, component. Thus while the total amount of AID's loan could be said to be in support of direct and indirect foreign exchange type costs, only 62% is expected to be expanded directly through the normal letter of commitment procedures. All other loan fund disbursements will be made in a ratio equal to the balance of loan funds available (\$1,130,500) to Guyanese funds allocated (\$1,000,000) or roughly on a 50-50 basis against progress payments.

The proposed level of expenditure in support of this project is considered reasonable and obtainable on the basis of previous GOG contributions. For 1971, the GOG's budgeted contribution to the Corentyne Road Project was US\$2.0 million down from \$2.8 million in 1970. In 1969, the GOG expended \$946,000 in support of the Soesdyke-Mackenzie Road project. For 1972 the GOG "Estimates" (Budget) provides US\$1.1 million for the East Coast Roads, i.e. AID Loan 010 (Georgetown Approaches) and the Kelly Dam Road. An additional US\$265,000 is estimated for the East Bank Berbice Road and US\$350,000 is carried as the funding allocation under the 1966-72 Development Plan for the Canje Road Project.

The project review process by the GOG, i.e., Technical Ministry, Ministry of Economic Development and finally Cabinet, assures all matters are thoroughly reviewed and approved in advance of the actual agreement. Additionally, the stated support of the Prime Minister and his personal application for the loan provides reasonable assurance of the Borrower meeting his commitments.

Local Cost Financing

It is proposed that \$1,130,500 in loan funds be used to fund local currency costs. As can be ascertained from the previous section this amount will not quite cover the cost of indirect foreign exchange expenditures expected to be incurred by Guyana in the performance of this project. It is because of the unusually high indirect component of cost that this project contains local currency financing.

Prospects of Loan Repayment

The GOG is not in default of any loans. Certain public corporations have been forced to re-negotiate terms with foreign lenders, the most recent about 1968, was the Telecommunications Authority, which was the recipient of a loan, prior to Independence, which the Authority could not service.

The balance of payment analysis and debt projections indicate the required resources will be available to serve Guyana's total indebtedness. A.I.D. need not insist on rights to first payments. There is no requirement for consideration of a two step procedure.

Financial Conclusion

The financial plan is considered adequate to meet the project schedule and the firmness of the inputs has been assured. We are also reasonably assured by analysis of repayment.

Continued close consultation among the Mission and Ministries of Finance, Works, Hydraulics and Supply and Consultant will assure proper budgetary support levels.

SECTION III: LOAN ADMINISTRATION

A. Execution Plan

It is anticipated that the loan will be authorized during May of 1972. As the Government of Guyana and the Ministry of Works, Hydraulics and Supply are well acquainted with AID loan agreements and as detailed discussions have been held with the Guyanese concerning the financial, engineering and construction conditions of the loan, we believe the loan will be signed in approximately three months from the date of authorization. Selection of, and contract negotiation with, a Consultant for final design, and preparation of bid documents and supervision of construction is currently in process as the GOG prefers to utilize the same consultant for this project and the Georgetown Approaches Project. Construction mobilisation can be initiated in late 1972.

Bar charts for the entire project construction program are included as Annex II, Exhibits 14 and 15. It shows that construction activity can begin during CY 1973 on all sub-projects., The East Canje and East Berbice Roads should be completed within the first full year of the project's operation. The West Canje Road will be finished near the end of CY 1973 while the Canje River Bridge will not be completed until mid to late summer 1975. Given the normal delays, all phases of the project

should be completed by the end of the third quarter of 1975, but to allow for slippage and processing of final payments, it is proposed that the terminal date for disbursements be December 31, 1975.

The Canje Bridge construction, demolition of the existing bridge and approaches will be carried out by a private foreign contractor. Plans and specifications will be prepared by the Consultant and competitive bids received by prequalified contractors from the U.S. or Code 941 countries. The possibility of including this project with the Georgetown Approach Roads will be considered, if timing of completion of bidding documents can be completed to avoid any delay in either of the projects.

The balance of the project, the New Amsterdam streets and Approach Roads will be done by Force Account by Ministry of Works, Hydraulics and Supply in accordance with plans and specifications prepared by the Consultant and approved by USAID. The Government will do, with their own forces, all work except the structure, and handling of materials which will be on a sub-contract basis. The Consultant will supervise the work, both by Contract and Force Account, to insure compliance with the plans and specifications and prepare monthly progress payments. All payments will be made on the units of work performed at the established unit price.

B. Disbursement Procedure

For payments of direct foreign exchange costs, USAID will, in conjunction with the Ministry of Finance establish Letters of Credit in favor of the Consulting Engineer and the foreign contractor performing the Canje River Bridge contract. A 10% retention against each payment will be made.

For Force Account and local sub-contractors employed by the MWH&S in their Force Account work, AID will provide payment monthly to the Government of Guyana, against documentation. The A.I.D. progress payments will be approximately 50% of the value of the work. No retention against progress payments is contemplated.

C. Procurement Procedures

All procurement will be in accord with the applicable Capital Projects Guidelines.

D. Conditions and Covenants

1. To firmly ensure the Borrower will make available the financial resources, equipment, personnel and other resources as required, the Borrower will confirm in writing prior to award of contract, for any and each construction contract, as to the availability of these inputs.
2. Borrower shall covenant to provide all right-of-ways necessary for the permanent construction and temporary detours and shall certify that such right-of-ways or legal rights of possession have been obtained prior to the award of any contract for construction.
3. Equipment, materials and services financed under the loan shall have their source and origin in and be procured from Code 941 countries.
4. United States dollars utilized under the loan to finance local currency costs shall be made available to Borrower or its designee through appropriate procedures.
5. Borrower shall covenant to maintain the Project and to make adequate provision in its budget annually for that purpose. Such amount shall be in addition to amounts Borrower provides in its budget annually for the maintenance and upkeep of other roads and trails in Guyana. Other than these conditions, it is recommended that only the usual terms and conditions and covenants should be incorporated in the Loan Agreement.

6. The loan shall be subject to such other terms and conditions as AID may deemadvisable.

SECTION IV - ISSUES

A series of questions were raised at the Intensive Review Request meeting relative to the ability of the MWH&S to cope with the amount of force account work proposed under this New Amsterdam project. The concern was well founded based on conditions then obtaining relative to the Georgetown project (Loan 504-L-010) and the World Bank's West Demerara road project. Although this issue has now been resolved, the loan committee believes it appropriate to comment on the issue to ensure that all reviewers are fully cognizant of the current position.

Although it was believed at the time of the IRR that the Bank's project would be constructed by force account, the project will be accomplished by a foreign contractor. (Reference Guyana: Highway Project IDA/R72-38-A, April 12, 1972).

The original PBQ&D study, and original loan application to A.I.D., covered both the Georgetown and New Amsterdam road projects. During the preparation of the PBQ&D study, a technical team of D.O.T., USAID/G, AID/W, MWH&S and PBQ&D personnel examined the force account capability of the MWH&S. The team concluded force account participation should be limited to the Georgetown City streets and bypass and the New Amsterdam approach roads and city streets with a foreign contractor performing the Georgetown approach roads and Canje River Bridge. The GOG's application for the loan, which included the Georgetown and New Amsterdam pieces, proposed the total road program be done by force account. In the negotiations that followed the GOG and AID agreed the GOG would construct by force account a 10.5 mile section of one of the approach roads to Georgetown in exchange for chopping the New Amsterdam portion of the GOG's request from the loan package. A loan agreement was executed based on the partial package.

In the negotiations leading to this loan paper the GOG, recognizing our firm reluctance to permit an over-extension of force account activities, proposed that we revert to break down between force account and foreign contractors as originally proposed by the technical team. This was agreed.

Therefore, while there are two projects in lieu of one, the division of work is in accord with our previous findings and recommendations and there has been no change in the expected cost of the combined package.

All other issues have been resolved.

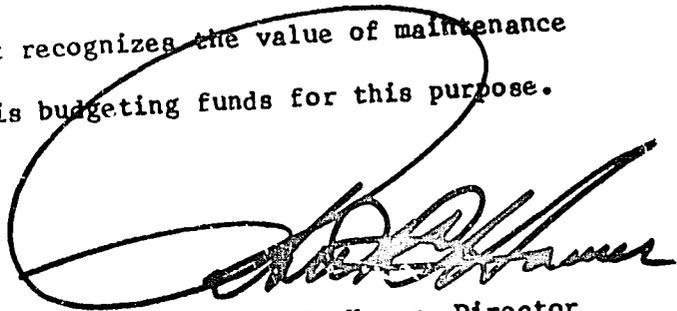
MISSION DIRECTOR'S CERTIFICATION
NEW AMSTERDAM ROAD APPROACHES AND BRIDGE PROJECT

I certify that the Government of Guyana has the capability required to effectively implement the proposed loan, maintain and utilize the referenced project, having taken into account the following factors:

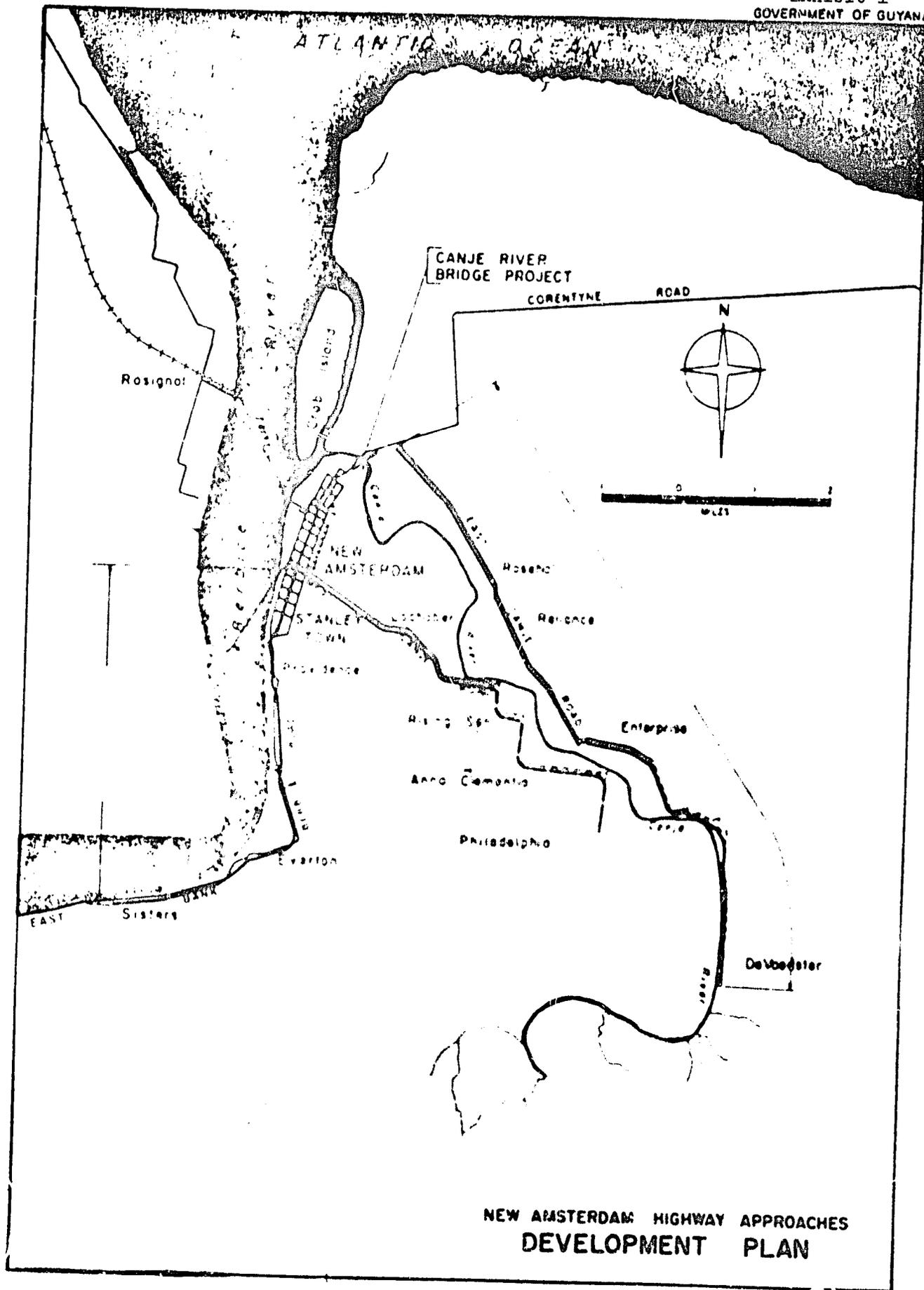
A. All projects previously financed by the U.S. Government either have been, or are being, effectively implemented, used and maintained.

B. Through training efforts the Government is constantly improving utilization of their resources.

C. Government recognizes the value of maintenance of facilities and is budgeting funds for this purpose.

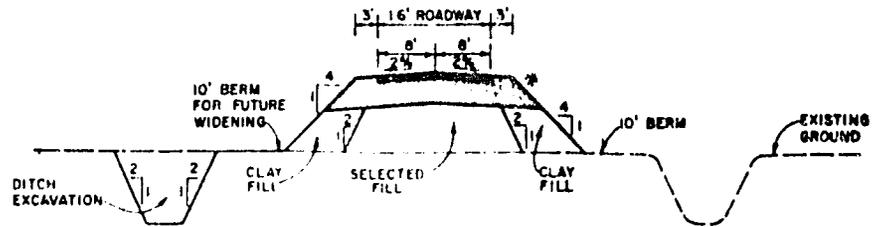


Robert C. Hamar, Director
USAID/Georgetown, Guyana

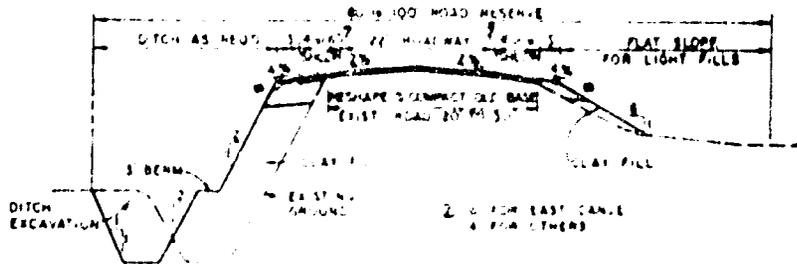


TYPICAL ROADWAY SECTIONS

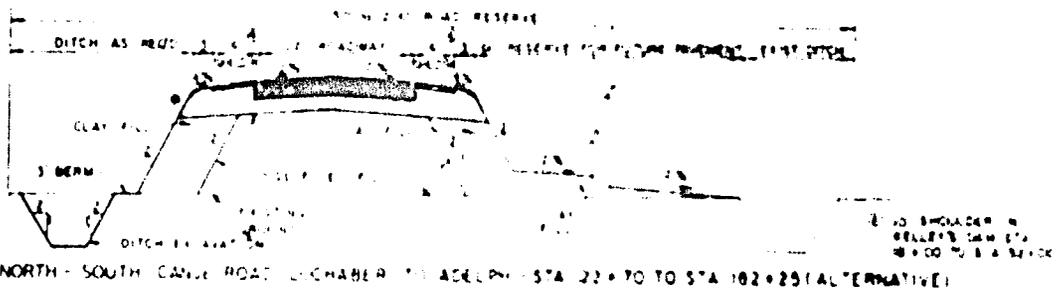
ANNEX II
Exhibit 2



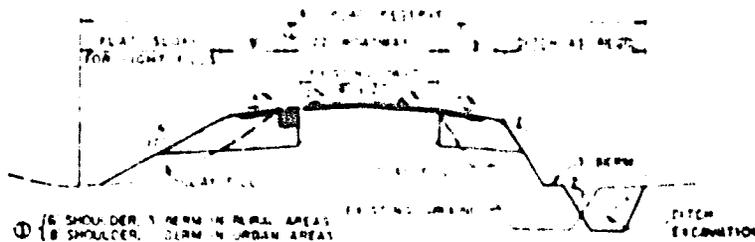
EAST CANJE ROAD, ENTERPRISE TO DEVOEDSTER - STA 265+00 TO STA 476+00



EAST CANJE ROAD ROSEHALL TO ENTERPRISE - STA 152+00 TO STA 265+00 AND SFUR
WEST CANJE ROAD NEW AMSTERDAM TO ROUNDTOWN - STA 7+00 TO STA 168+00
EAST BANK (B-H) ROAD, NEW AMSTERDAM TO SISTERS - STA 0+00 TO STA 323+50



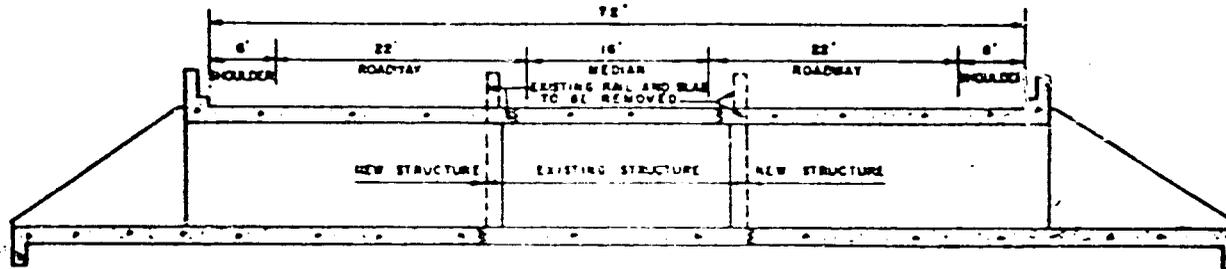
NORTH-SOUTH CANJE ROAD LEXAHER TO ADELPHI - STA 22+70 TO STA 102+25 (ALTERNATIVE)



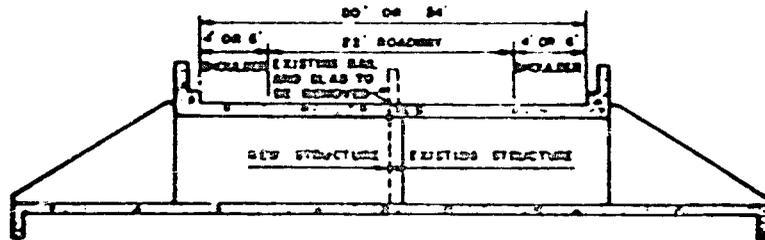
EAST CANJE ROAD, CORENTYNE ROAD TO ROSEHALL - STA 34+70 TO STA 152+00

LEGEND

- 2" BITUMINOUS DOUBLE SURFACE TREATMENT
- 2" ASPHALT CONCRETE
- 2 1/2" ASPHALT CONCRETE
- 6" CRUSHED STONE
- 10" MIN SAND CLAY
- * NEW AMSTERDAM AREA USE LIME STABILIZATION AS SUBBASE



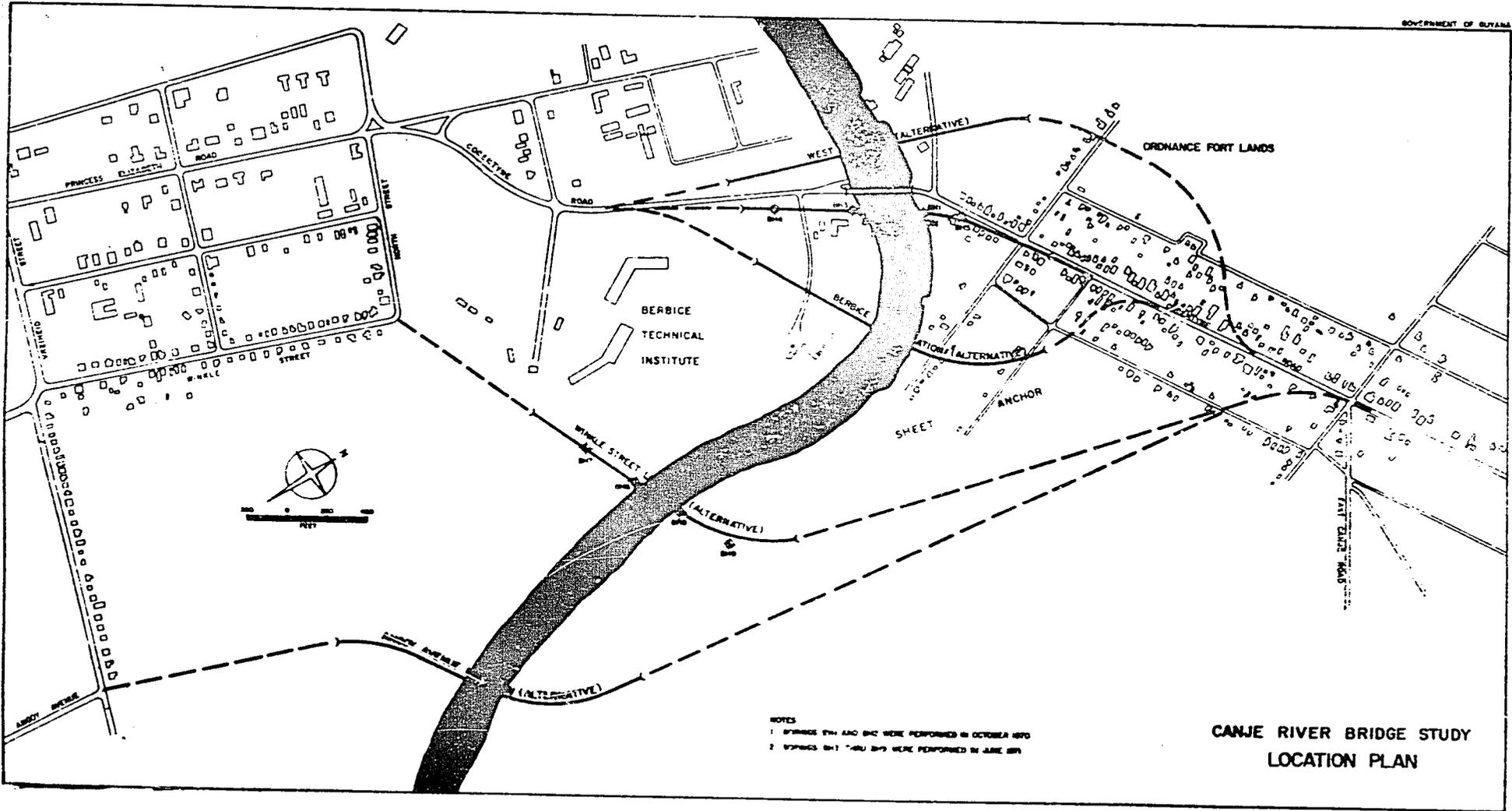
TYPICAL SECTION SHOWING EXISTING BRIDGES WIDENED TO 72'



TYPICAL SECTION SHOWING EXISTING BRIDGES WIDENED TO 30' AND 34'

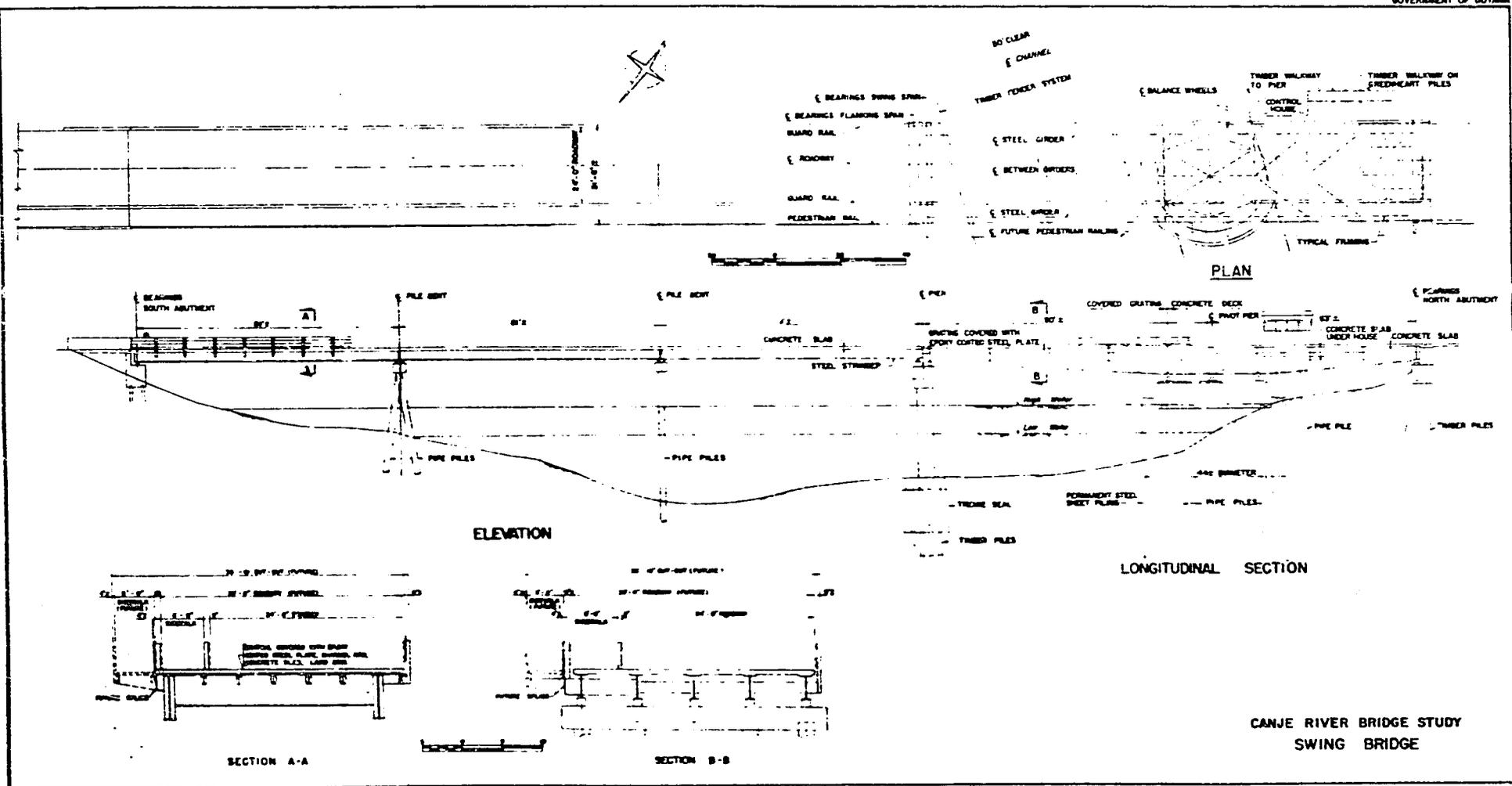


TYPICAL SECTIONS SHOWING
WIDENING EXISTING BRIDGES



NOTES
 1. SPINGS 274 AND 282 WERE PERFORMED IN OCTOBER 1970
 2. SPINGS 281 AND 283 WERE PERFORMED IN JUNE 1971

CANJE RIVER BRIDGE STUDY
 LOCATION PLAN



CANJE RIVER BRIDGE STUDY SWING BRIDGE

BENEFIT-COST RATIOS,
CANJE RIVER BRIDGE COMBINED WITH
CORENTYNE ROAD

<u>Alternative</u>	<u>Present Worth at 10%</u> <u>(Thousands of Guyana Dollars)</u>		<u>Benefit-</u> <u>Cost</u> <u>Ratio</u>
	<u>Total Benefits</u>	<u>Total Costs</u>	
West Location, High-Level	80,071.3	25,771.9	3.11
West Location, Medium-Level	80,071.3	24,684.8	3.25
East Location, High-Level	80,373.8	25,744.9	3.12
East Location, Medium-Level	80,379.8	24,234.0	3.31
East Location, Low-Level	80,375.3	24,052.7	3.35
East Location, Swing Bridge	80,282.8	23,563.7	3.41
East Location, Tunnel	Eliminated by Inspection		
Berbice Tech. Inst., High-Level	80,294.8	25,655.1	3.13
Berbice Tech. Inst., Medium-Level	80,294.8	24,209.5	3.32
Winkle Street, High-Level	80,373.8	26,028.0	3.08
Winkle Street, Medium-Level	80,379.8	24,576.5	3.27
Angoy Avenue, High-Level	79,778.7	26,235.7	3.03
Angoy Avenue, Medium-Level	79,778.7	24,794.9	3.22

Note: Benefits and costs of the New Amsterdam - Crabwood Creek section of the Corentyne Road taken from Table 14 of the 1967 Report on Corentyne Road

Summary of Central Government Operations

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	Revised Estimates Budget <u>1971</u>
	(In millions of Guyana Dollars)					
Current revenue	85.4	92.9	102.6	110.6	132.9	128.3
Current expenditure	-84.1	-87.9	-98.2	-106.9	-122.7	-137.5
<u>Current Surplus</u>	<u>1.3</u>	<u>5.0</u>	<u>4.4</u>	<u>3.7</u>	<u>10.2</u>	<u>- 9.2</u>
Capital revenue	11.6	14.2	7.6	6.3	3.9	1.1
External grants	(10.7)	(8.0)	(5.8)	(4.1)	(2.6)	(6.4)
Other	(0.9)	(6.2)	(1.8)	(2.2)	(1.3)	(0.7)
Capital expenditure	-31.9	-41.3	-39.7	-44.9	-43.5	-58.4 *
<u>Over-all deficit</u>	<u>-19.0</u>	<u>-22.1</u>	<u>-27.7</u>	<u>-34.9</u>	<u>-29.4</u>	<u>-66.7</u>
<u>Financing</u>	<u>19.0</u>	<u>22.1</u>	<u>27.7</u>	<u>34.9</u>	<u>29.4</u>	<u>66.7</u>
Net external borrowing	1.6	6.7	11.9	13.1	16.9	
Utilization	(4.4)	(11.1)	(15.7)	(17.2)	(20.1)	
Amortization	(-2.8)	(-4.4)	(-3.8)	(-4.1)	(-3.2)	
Change in GOG external assets and net domestic borrowing	17.4	15.4	15.8	21.8	12.5	
	(As per cent of GNP)					
Current revenue	23.6	23.4	23.5	23.9	26.7	NA
Current expenditure	23.3	22.1	22.5	23.1	24.6	NA
<u>Current surplus</u>	<u>0.3</u>	<u>1.3</u>	<u>1.0</u>	<u>0.8</u>	<u>2.1</u>	NA
Capital expenditure	8.8	10.4	9.1	9.7	8.7	NA
<u>Over-all deficit</u>	<u>5.3</u>	<u>5.6</u>	<u>6.4</u>	<u>7.5</u>	<u>5.9</u>	
^{GNP} ^ Growth Rate	6.8	9.9	9.8	6.1	7.6	
GNP (at current prices)	361.1	397.0	436.3	463.1	498.2*	

* First estimate, subject to downward revision

Summary Balance of Payments
 (In millions of U.S. Dollars)

	<u>1966</u>	<u>1967</u> ^{1/}	<u>1968</u>	<u>1969</u>	<u>1970</u>
<u>Goods, services, and</u>					
<u>private transfers</u>	-29.6	-30.0	-14.8	-13.7	-21.7
Merchandise	-5.7	-7.9	7.4	9.6	-1.9
Exports, f.o.b.	(112.2)	(123.0)	(117.4)	(127.7)	(133.0)
Imports, c.i.f.	(-117.9)	(-130.9)	(-110.0)	(-118.1)	(-134.9)
Travel	-2.2	-3.3	-2.7	-2.7	-2.4
Investment income	-19.1	-15.7	-15.1	-17.8	-17.4
Other services	-2.5	-3.3	-2.6	-1.9	-0.4
Private transfers	-0.1	-0.2	-1.8	-0.9	0.4
<u>Capital and official transfers</u>	20.0	33.0	17.3	14.2	21.6
Private capital	12.8	21.4	9.1	4.2	11.0
Direct investment	(15.7)	(20.8)	(8.0)	(8.7)	(...)
Other private capital	(-2.9)	(0.6)	(1.1)	(-4.5)	(...)
Public capital & transfers	7.2	11.6	8.2	10.0	10.6
Capital	(1.8)	(4.8)	(6.0)	(8.6)	(10.1)
Transfers	(5.4)	(6.8)	(2.2)	(1.4)	(0.5)
<u>Allocation of SDRs</u>	--	--	--	--	2.5
Unidentified transactions	2.5	1.8	-6.3	-5.2	-4.7
<u>Monetary movements (increase -)</u>	7.1	-4.8	3.8	4.7	2.3
Government	0.1	2.4	2.2	-0.5	-0.6
Monetary authorities	3.2	-3.9	-4.7	3.0	0.2
Commercial banks	3.6	-3.3	5.6	1.9	1.5
Post Office Savings Bank	0.2	--	0.7	0.3	1.2

Source: IMF

^{1/} Excluding devaluation profits or losses on foreign assets and liabilities.

Net International reserves
 (In millions of U.S. Dollars)

	December 31					
	1965	1966	1967	1968	1969	1970
<u>Total</u>	<u>43.8</u>	<u>36.7</u>	<u>36.4</u>	<u>32.6</u>	<u>27.9</u>	<u>25.6</u>
<u>Government</u>	<u>11.9</u>	<u>11.8</u>	<u>8.3</u>	<u>6.1</u>	<u>6.6</u>	<u>7.2</u>
Joint Consolidated Fund	0.5	0.9	-0.8	-0.2	-0.4	-0.2
Investment surplus balances	0.3	0.2	0.2	0.2	0.2	0.2
Sugar industry funds	5.9	5.3	3.7	0.6	1.3	1.1
Sinking funds against internal debt	2.7	2.9	3.3	3.6	3.7	4.5
Other funds	2.5	2.5	1.8	1.9	1.8	1.6
 <u>Banking System</u>	 <u>31.9</u>	 <u>24.9</u>	 <u>28.1</u>	 <u>26.5</u>	 <u>21.3</u>	 <u>18.4</u>
Monetary authorities	20.1	16.9	18.8	23.5	20.5	20.3
Deposits abroad)	(11.0)	(1.3)	(1.5)	(1.2)	(4.7)	(3.3)
Securities)		(13.1)	(15.6)	(20.8)	(14.2)	(14.7)
Net IMF position	(--)	(1.2)	(1.2)	(1.2)	(.2)	(1.8)
SDR holdings	(--)	(--)	(--)	(--)	(--)	(0.1)
Claims on BCCB	(9.0)	(1.2)	(0.4)	(0.3)	(0.3)	(0.3)
Other	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Commercial banks	7.2	3.6	5.6	--	-1.9	-3.4
Assets	(8.5)	(5.1)	(7.2)	(1.8)	(2.1)	(1.5)
Liabilities	(- 1.3)	(-1.6)	(-1.6)	(-1.8)	(-4.0)	(-4.9)
Post Office Savings Bank	4.6	4.4	3.7	3.0	2.7	1.5

Source: Bank of Guyana; and Accountant General Annual Reports.

Exports by Selected Commodities

(Value in millions of U.S. dollars;
Unit value in U.S. dollars per long ton; volume
in million long tons for bauxite and thousand
long tons for other products)

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>
<u>Total exports: value</u>	<u>112.2</u>	<u>123.0</u>	<u>117.4</u>	<u>127.7</u>	<u>133.0</u>
<u>Agricultural exports: value</u>	<u>58.4</u>	<u>65.4</u>	<u>58.9</u>	<u>62.4</u>	<u>57.2</u>
Sugar					
Volume	267.0	311.6	294.0	33.0	286.1
Unit value	118.7	119.2	113.9	124.0	126.5
Value	31.7	37.2	33.5	41.3	36.2
Rice					
Volume	108.1	94.4	94.0	62.3	59.4
Unit value	134.4	146.2	139.4	157.3	151.5
Value	14.5	13.8	13.1	9.8	9.0
<u>Other agricultural exports: value</u>	<u>12.2</u>	<u>14.4</u>	<u>12.3</u>	<u>11.3</u>	<u>12.0</u>
Molasses	(1.6)	(2.7)	(2.1)	(1.8)	(1.6)
Rum	(2.0)	(3.3)	(2.1)	(1.4)	(1.6)
Timber	(2.1)	(1.6)	(1.4)	(1.2)	(1.8)
Shrimp	(3.8)	(3.5)	(3.7)	(3.8)	(4.3)
Other	(2.7)	(3.3)	(3.0)	(3.1)	(2.7)
<u>Mineral exports: value</u>	<u>53.3</u>	<u>55.7</u>	<u>55.4</u>	<u>62.3</u>	<u>72.3</u>
Calcined bauxite					
Volume	0.49	0.46	0.59	0.65	0.71
Unit value	30.6	32.4	31.5	32.5	34.4
Value	15.0	14.9	18.6	21.1	24.1
Dried bauxite					
Volume	1.53	1.82	1.78	2.10	2.30
Unit value	7.8	8.6	8.2	8.7	9.4
Value	12.0	15.6	14.6	18.3	21.7
Alumina					
Volume	297.0	292.0	267.0	295.0	345.0
Unit value	54.8	64.0	68.2	70.2	71.6
Value	19.3	18.7	18.2	20.7	24.7
<u>Other mineral exports: value</u>	<u>7.0</u>	<u>6.5</u>	<u>4.0</u>	<u>2.2</u>	<u>1.8</u>
Manganese	(3.2)	(2.9)	(1.6)	(--)	(--)
Diamonds	(3.0)	(3.6)	(2.4)	(2.0)	(1.6)
Other	(0.8)	(--)	(--)	(0.2)	(0.2)
<u>Other exports: value</u>	<u>0.5</u>	<u>1.9</u>	<u>3.1</u>	<u>3.0</u>	<u>3.5</u>

External Public Debt

(In millions of U.S. dollars)

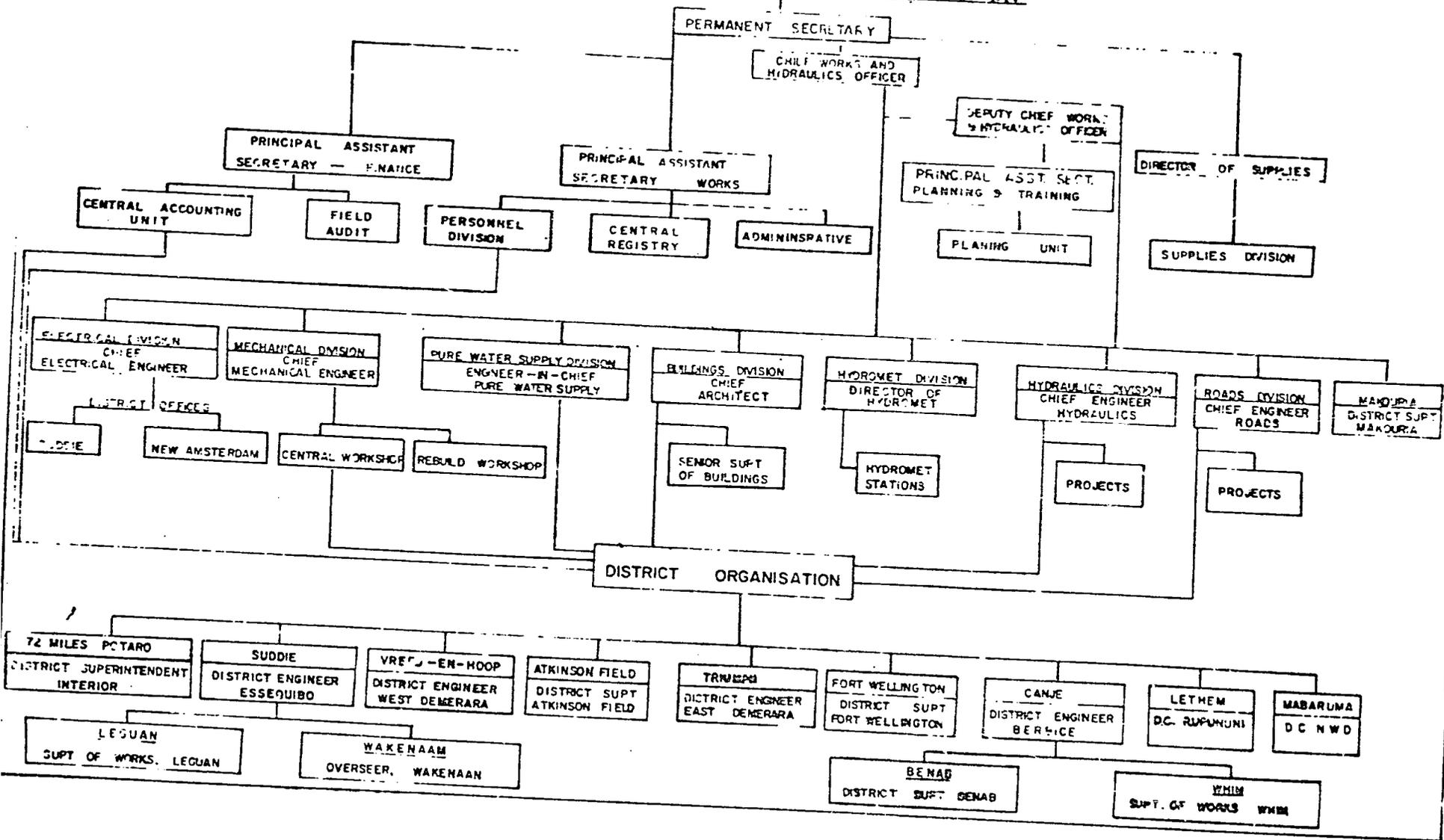
	Outstanding as of December 31						Undis- bursed Balances 12/31/70
	1965	1966	1967	1968	1969	1970	
<u>Total</u>	<u>56.6</u>	<u>58.0</u>	<u>54.4</u>	<u>58.8</u>	<u>67.5</u>	<u>77.5</u>	<u>45.4</u>
<u>Total Central Government</u>	<u>53.1</u>	<u>53.2</u>	<u>51.8</u>	<u>58.0</u>	<u>67.2</u>	<u>76.0</u>	<u>39.6</u>
Market loans	14.9	13.8	10.4	9.2	8.5	8.3	--
United Kingdom ^{1/}	(14.9)	(13.8)	(10.4)	(9.2)	(8.5)	(8.3)	(--)
Project loans	36.0	36.8	37.8	45.4	55.7	65.7	39.6
United Kingdom	(35.4)	(35.9)	(33.4)	(34.5)	(36.9)	(38.8)	(7.5)
United States	(--)	(0.3)	(3.3)	(8.8)	(16.0)	(19.8)	(20.3)
Canada	(--)	(0.1)	(0.8)	(2.0)	(2.6)	(5.7)	(0.2)
IBRD and IDA	(0.6)	(0.5)	(0.3)	(0.1)	(0.2)	(1.4)	(11.6)
Private loans	1.0	1.4	1.1	1.0	0.8	(--)	(--)
United Kingdom	(1.0)	(1.4)	(1.1)	(1.0)	(0.8)	(--)	(--)
Other U.K. Government loans	1.2	1.2	2.5	2.4	2.2	2.0	--
<u>Loans with government guarantee</u>	<u>3.5</u>	<u>4.3</u>	<u>2.6</u>	<u>0.8</u>	<u>0.3</u>	<u>1.5</u>	<u>5.8</u>

Source: IMF

^{1/} Net of sinking fund balances.

The outstanding debt changed little between 1965 and 1968 but rose in both 1969 and 1970. The debt had actually declined in 1967, as net utilization of loans was more than offset by a reduction of about \$8.5 million in the U.S. dollar value of debt owed to the United Kingdom as a result of the devaluation of sterling in November 1967.

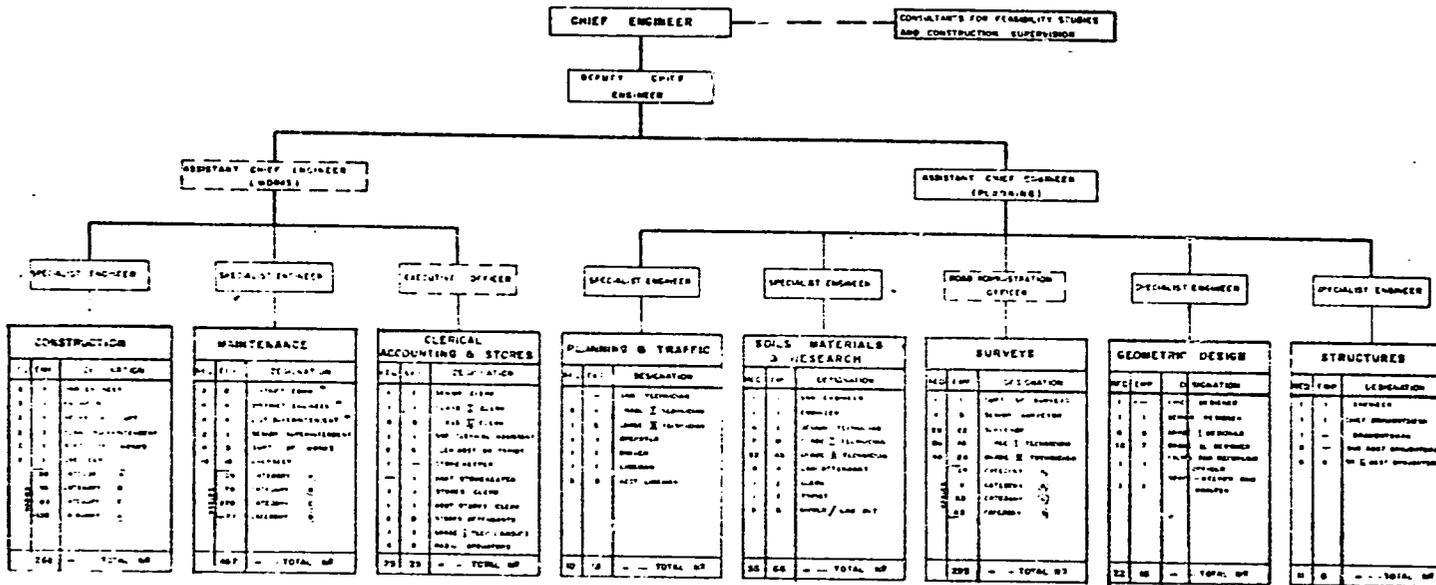
MINISTRY OF WORKS, HYDRAULICS AND SUPPLY - ORGANIZATIONAL CHART
MINISTER AND PARLIAMENTARY SECRETARY



MINISTRY OF WORKS, HYDRAULICS AND SUPPLY

ROADS DIVISION

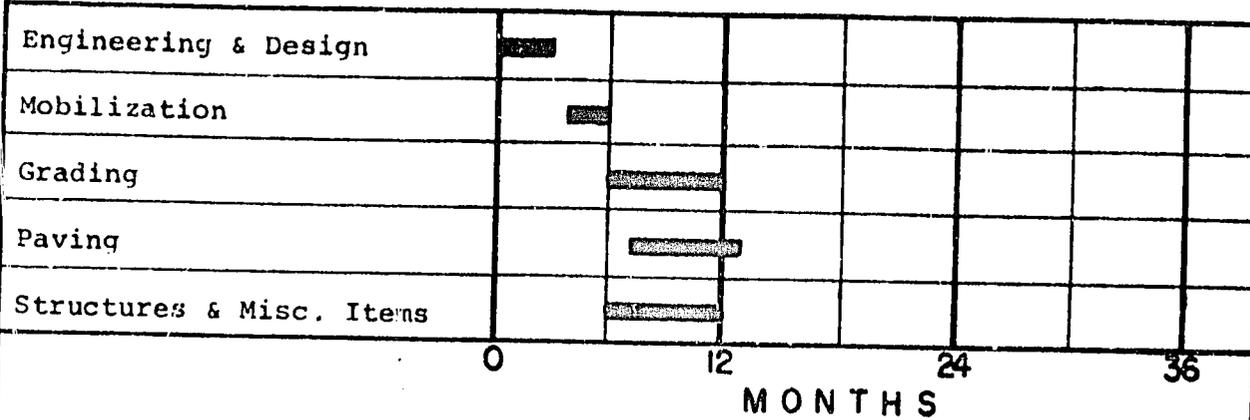
ORGANIZATION CHART-1969



DESIGNATION OR CATEGORY	DESCRIPTION
A	CLERK TYPIST, STOREKEEPER
B	STONES ATTENDANT OR STONES STOCK WORKER
C	CLERK - CIVIL ENGINEER, ROADWORK, CHECKER, MATHEMATICS
D	LEADING HAND PLUMBER, LABORER
E	OPERATOR DRIVER, MECHANIC, SECTIONER, ENGINEER, CARPENTER
F	CLERK, STORES ATTENDANT, TYPIST, CAMP ATTENDANT, MATERIALS MAN, JANITOR
G	STANDARD SECTION OFFICER
H	LABORER, BRICKLAYER, MASONRY, UNCLASSIFIED
I	OPERATOR, TRANSPORT OFFICER, DRIVER, CHANGEMAN, STAFF CAR, INSTRUMENTATION, ONE WHEELER, CYCLIST

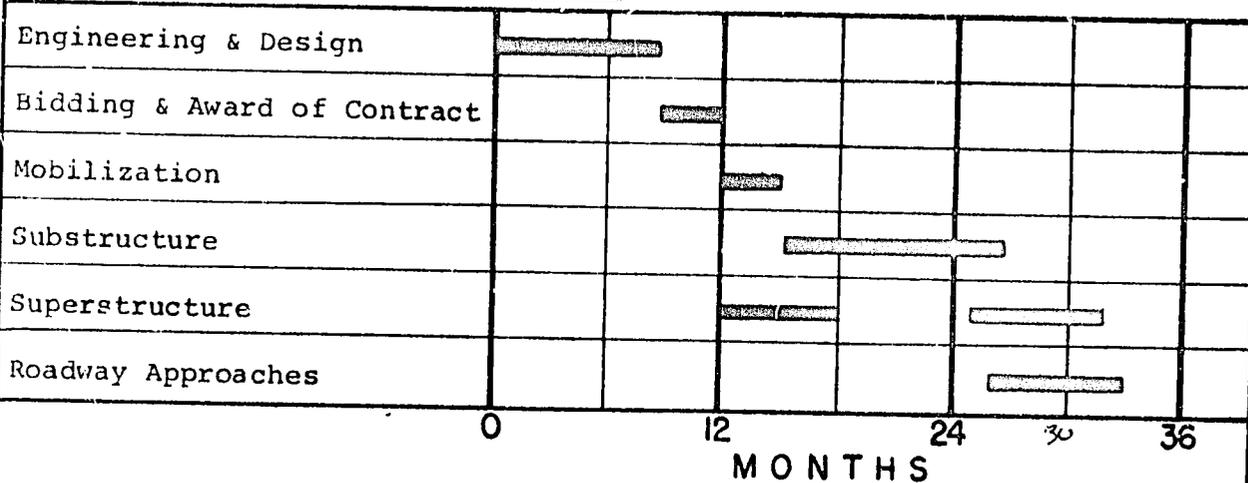
NOTE:-
 * - HAS OTHER RESPONSIBILITIES IN ADDITION TO ROAD MAINTENANCE.

EAST BANK BERBICE



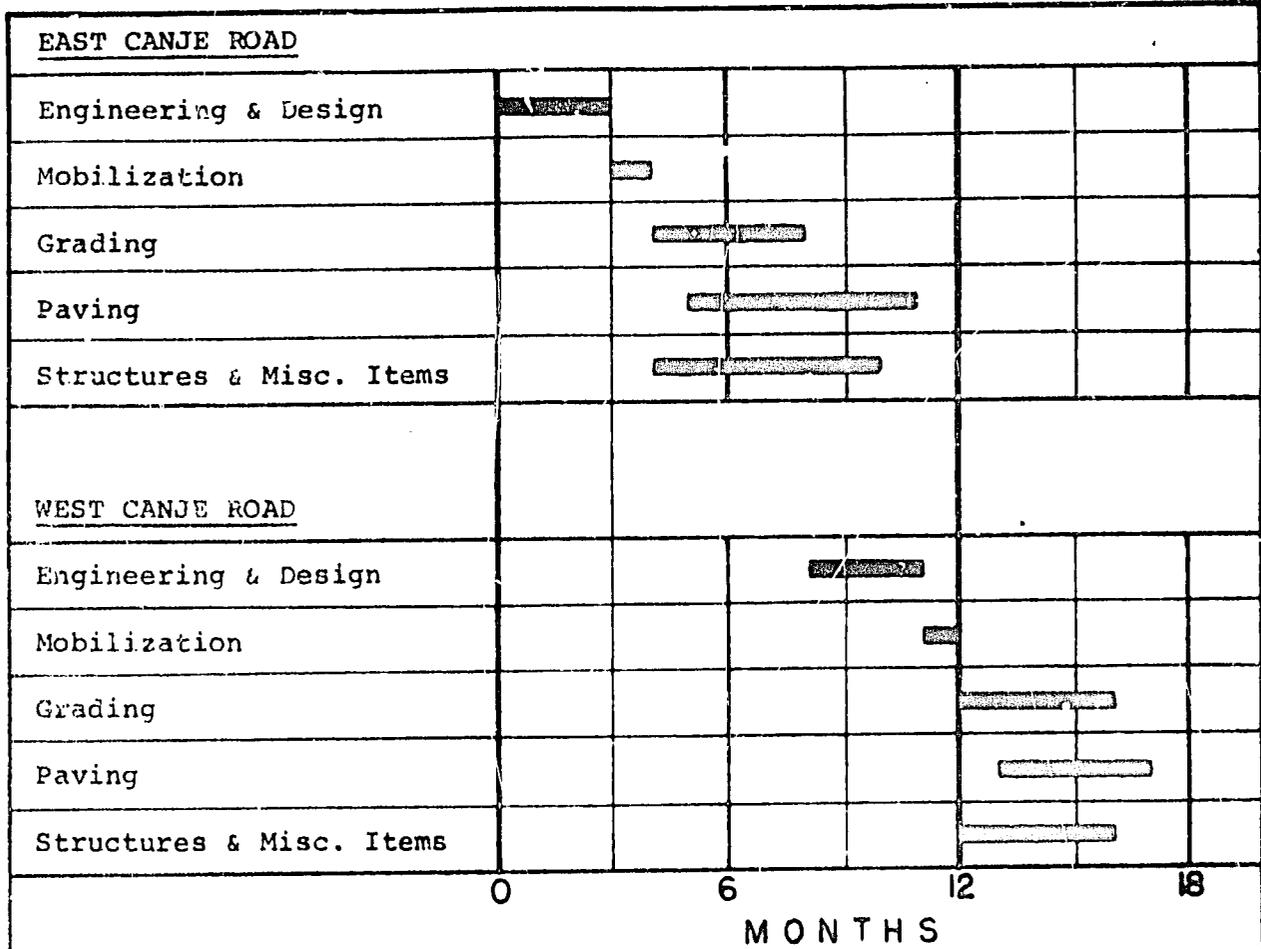
NOTES: (1) Above schedule assumes construction by Maintenance Staff on a Force Account Basis.
(2) Final schedule must reflect rainy season, probably one at three months, depending upon actual start date.

CANJF RIVER BRIDGE & APPROACH ROADS



NOTES: (1) Assumes work by a Contractor.
(2) Final schedule must reflect rainy seasons, the number to depend on actual start date.

**CONSTRUCTION PROGRAMME
HIGHWAY APPROACHES TO NEW AMSTERDAM**



NOTES: (1) Above schedules assume construction by Maintenance Staff on a Force Account Basis.

(2) Final schedule must reflect rainy season, probably one of three months, depending on actual start date.

ANNEX II, EXHIBIT 16

<u>District</u>	<u>Staff</u>						<u>Equip.</u>			
	<u>Foreman</u>	<u>Labourers</u>	<u>Equipment Operators</u>	<u>Drivers</u>	<u>Miscellaneous</u>	<u>Steel Wheel Roller</u>	<u>Front End Loader</u>	<u>Tractor and Trailer</u>	<u>Dragline</u>	<u>Grader</u>
East Berbice	4	22	8	5	3	2	1	1	1	2
West Berbice	2	22	5	5	1	1	-	1	-	1
East Demerara	2	20	8	3	2	1	-	2	-	1
East Bank Demerara	2	32	6	4	1	2	1	-	-	-
West Demerara*	2	11	13	2	3	1	1	1	-	2
Essequibo	4	30	8	6	-	-	1	3	-	1

EQUIPMENT

<u>District</u>	<u>Bitumen Distributor</u>	<u>Water Tender</u>	<u>Patch Mixer</u>	<u>Bitumen Kettle</u>	<u>Land Rover</u>	<u>Tractor Loader</u>	<u>Pneumatic Tired Roller</u>	<u>Concrete Mixer</u>	<u>Service Unit</u>	<u>Bulldoz.</u>
East Berbice	1	1	1	2	1	-	-	-	-	-
West Berbice	-	-	-	-	-	1	1	-	-	-
East Demerara	1	1	-	-	-	1	-	2	-	-
East Bank Demerara	1	-	-	-	1	1	-	2	-	-
West Demerara*	1	1	1	-	1	1	1	-	1	1
Essequibo	-	1	1	-	-	-	1	-	-	-

* Part of this equipment is on a temporary assignment due to capital works and will be redeployed upon completion. Some staff reorganization will be required upon the completion of the capital works.

Note: Figures not available for other districts.

ANNEX II
Exhibit 17

EXPENDITURE - ROAD MAINTENANCE
1962-1970

(Annual Expenditure in Guyana Dollars)

District	1962	1963	1964	1965	1966	1967	1968	1969	1970
East Berbice	440,000	421,600	451,100	363,000	326,000	327,000	159,000	260,400	
West Coast Berbice	521,700	542,200	125,300	185,000	115,000	72,000	98,000	138,600	345,000
East Coast Demerara	*	*	511,800	318,000	105,000	174,000	1,000	139,700	217,000
East Bank Demerara	71,800	34,700	56,700	88,200	50,000	52,000	87,000	101,200	160,000
West Demerara	254,500	246,400	300,100	233,000	131,000	168,000	98,000	116,800	142,000
Essequibo	271,300	238,800	269,400	210,000	185,000	325,000	132,000	145,700	140,000
North West	18,000	16,100	34,000	35,000	28,000	44,000	50,000	61,400	88,000
Interior	131,400	149,500	144,300	173,000	152,000	32,000	156,000	201,900	152,000
Georgetown	NA	NA	NA	NA	41,000	227,000	109,000	67,700	140,000
Rupununi	NA	NA	NA	NA	NA	NA	NA	NA	
Totals	1,708,700	1,649,300	1,892,700	1,605,200	1,133,000	1,421,000	890,000	1,233,400	434,000

ANNEX II
Exhibit 18

ANNUAL RECORD OF ALLOCATIONS FOR ROAD MAINTENANCE

Year	Requested Allocation	Approved Allocation
1966	-	1,260,000
1967	1,500,000	1,400,000
1968	1,750,000	1,500,000
1969	1,800,000	1,400,000
1970	2,032,000	1,450,000

ANNEX II, EXHIBIT 19
 PROJECTED EXPENDITURE - MAINTENANCE OF ROADS
 1972 - 1974

Annual Expenditure in Guyana Dollars

District	1972	1973	1974
East Berbice	300,000	300,000	310,000
West Berbice	240,000	250,000	250,000
East Demerara	250,000	270,000	270,000
East Bank	200,000	200,000	180,000
West Demerara	180,000	200,000	180,000
Essequibo	260,000	260,000	270,000
North West	70,000	70,000	80,000
Interior	200,000	180,000	200,000
Georgetown	100,000	100,000	100,000
	<hr/>	<hr/>	<hr/>
TOTAL	1,800,000	1,830,000	1,840,000



THE LAWS
OF
BRITISH GULANA

IN FORCE ON

THE 1ST DAY OF JULY, 1955.

REVISED EDITION

CHAPTER 179.

ACQUISITION OF LANDS
FOR PUBLIC PURPOSES

To be obtained from the Chief Secretary, Georgetown, British Guiana and the Crown Agents for
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2638 Cap. 179.] *Acquisition of Lands for Public Purposes.*

CHAPTER 179.

ACQUISITION OF LANDS FOR PUBLIC PURPOSES.

ARRANGEMENT OF SECTIONS.

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CHAPTER 179.

ACQUISITION OF LANDS FOR PUBLIC PURPOSES.

[17TH DECEMBER, 1914.]

1929 Ed.
c. 170.

Short title.

1. This Ordinance may be cited as the Acquisition of Lands for Public Purposes Ordinance.

Acquisition of Land for Public Purposes. [Cap. 179. 2639

2. In this Ordinance--

"land" includes all land, whether covered with water or otherwise, together with any buildings and erections thereon, and, where that meaning may be inferred, any right therein;

"the Court" means the Supreme Court, and includes any judge thereof;

"the Registrar" means the Registrar of the Court.

Inter-
pretation.

3. The Governor in Council may, by order published in the Gazette, declare any railway, tramway, road, canal, dock, harbour work, polder, building, dam, sluice, or drain, or any work, measure or undertaking of whatsoever description whether *ejusdem generis* with any of the foregoing or not, and whether constructed or to be constructed out of public funds or otherwise or by the Government or otherwise, to be a public work and may alter or vary any order so made.

Power to
declare a
work a
public work.

4. The Governor in Council may, by order published in the Gazette, authorise the Commissioner of Lands and Mines or any other person, together with his agents, servants or workmen, to enter upon any land specified in the order for the purpose of surveying or otherwise examining it with a view to the acquisition of the whole or of part of it for the construction of a public work.

Authorisation
to enter and
examine land
required.

5. (1) When any order aforesaid has been made the person authorised shall have power to do all or any of the following acts, namely--

(a) to enter upon and survey and take levels of any land in any locality within which the public works are intended to be executed; or

(b) to dig or bore into the sub-soil of that land;

(c) to do all other acts necessary to ascertain whether the land is adapted to the purpose:

Provided that neither the person authorised, nor his agent, servants or workmen, shall enter into any building or into or upon any enclosed yard, court, or garden, attached to a dwelling-house, except with the consent of the occupier thereof, without previously giving the occupier at least seven days' notice in writing of his intention to do so.

Powers of
Commissioner of
Lands and
Mines or
other person
authorised.

6. The report of the person, together with a plan of the land, shall be laid before the Governor in Council, and after consideration thereof the Governor in Council may enter into negotiations for the purchase of the land, or, if for any reason he deems it

Power to
declare land
to be
required for
public work.

2640 Cap. 179.] *Acquisition of Lands for Public Purposes.*

advisable, may by order published in the Gazette declare that the land or any part thereof is required for a public work and may alter or annul any order so made.

Vesting of
land.

7. (1) At the expiration of one month from the date of the order mentioned in the last preceding section or of any longer period fixed by the order, the land specified therein shall vest in the Colony as colony land, subject to the payment of the purchase money or of any compensation as hereinafter provided:

Provided that no land shall so vest unless and until the Legislative Council has voted or agreed to vote the sum estimated to be necessary for the public work for which the land is required.

(2) Land so acquired may be sold, leased, or otherwise dealt with in all respects in the same manner in which colony land is sold, leased or otherwise dealt with from time to time by any law, practice, or procedure, notwithstanding that it has not been used or has ceased to be used for the purpose of the public work for which it was acquired.

Notification
to owner and
suspension
of dealings
with the land.

8. (1) When any order is made under section 4 or section 6 of this Ordinance, notice thereof shall be served personally on the proprietor or his attorney if either is resident in the Colony, and, if he is not so resident or cannot be found, shall be considered duly served if it is published in the Gazette and in one local newspaper and a copy is also affixed upon a conspicuous part of the land.

(2) From the date of that service no transport or mortgage shall be advertised, passed, or registered, and no contract relating to the land entered into, for the period of one month in the case of an order under section 4, and until the date of the vesting of the land in the Colony in the case of an order under section 6 hereof. Any transport, mortgage, or contract passed, registered or entered into contrary to this Ordinance shall be null and void.

Vesting of
land in the
Colony.

9. (1) When any order is made under section 6 hereof, the Chief Secretary shall cause a certified copy of it, together with a plan of the land duly certified by a qualified surveyor, to be deposited in the deeds registry and may at the same or at any subsequent time deposit a certificate under his hand to the effect that the Legislative Council has voted the sum necessary for compensation; and from the expiration of the period prescribed by section 7 hereof that certified copy shall be conclusive

Acquisition of Lands for Public Purposes. [Cap. 179. 2041

evidence that the land set out in the plan is vested in the Colony, and the Registrar of deeds shall register the title accordingly in the same manner as if transport had been advertised and passed notwithstanding any entry of opposition.

(2) (a) Anyone who would have a right to oppose if transport of the land were about to be passed by the owner thereof shall have the same right to enter opposition to the registration but that opposition shall be deemed to apply only to the payment of the compensation money to the parties interested.

(b) Where the matters alleged in the opposition are disputed by any of the persons claiming the compensation money or any part thereof, the person so claiming may enter a defence to the opposition and thereafter the proceedings shall continue as in ordinary opposition suits; and the Court shall have full power to make any order in relation to the opposition suit, both as to granting time or otherwise appearing to the Court to be necessary in order to have the questions at issue between the parties determined.

10. In case the public work which is the subject of an order under section 6 hereof is a railway, the Governor in Council, subject to any special Ordinance passed for the purposes of a public work under this Ordinance, may exercise any of the powers and shall be subject to all the obligations, as regards construction of a railway and works connected therewith, as regards temporary occupation of lands near a railway during construction thereof, and as regards works for accommodation of lands adjoining a railway, and also may exercise all other powers and shall be subject to all other obligations, which a company may exercise or to which it is subjected under sections 244 to 254 both inclusive, sections 256 to 260 both inclusive, and 280 to 284 both inclusive, of the Companies Clauses and Powers Consolidation Ordinance, 1846, and those sections shall for that purpose, *mutatis mutandis*, be read and construed as if the words "Governor in Council" were substituted for the words "company" or "railway company" and as if any reference in those sections to the Ordinance last aforesaid and to the special Ordinance were only to this Ordinance and to any special Ordinance passed for the purposes of any public work sanctioned by an order under this Ordinance:

Powers of
Governor in
Council.

No. I of
1846.

Provided that,—

(a) in cases where notices, summonses, or other legal process are to be given or served those sections shall be read and construed as if the words "Chief Secretary," and where summonses or other legal process are to be served as if the words

2642 **Cap. 179.] Acquisition of Lands for Public Purposes.**

“ the Attorney General,” were substituted for the words “ company ” or “ railway company ”; and

No. I of
1846.

(b) nothing in section 249 of the Companies Clauses and Powers Consolidation Ordinance, 1846, shall be held to authorise any action for nuisance or other injury against the Governor in Council or against the general Government of the Colony.

Compensation
to adjacent
proprietors.

11. The owner of any land which, without any portion thereof having been actually acquired, has been injured by the erection or construction upon lands acquired under this Ordinance of a public work shall be entitled to compensation in the manner hereinafter provided for any servitude, easement, or right appurtenant to the land destroyed or interfered with or for any injury caused to the land by that erection or construction.

Arbitration.

12. Nothing in this Ordinance contained shall be construed or deemed or taken to prevent or preclude the persons interested by mutual agreement submitting the difference between them as to compensation to the decision of an arbitrator or arbitrators in manner provided by the Companies Clauses and Powers Consolidation Ordinance, 1846.

No. I of
1846.

Giving
directions on
publication
of order.

13. (1) When any order has been published by the Governor in Council under section 6 hereof, the Court to which application may be made by motion *ex parte* by or on behalf of the Attorney General shall direct the value of the land described in the order to be ascertained and the amount of compensation which ought to be paid to the several persons interested therein to be determined.

(2) The Court shall further appoint the time and place at which it will sit to hear and determine the matter, and the Registrar shall cause public notice of the time and place so appointed to be published in the Gazette and in one other newspaper published in the Colony.

Notices to
persons
interested.

14. The Court shall direct what notices shall be given or served to enable all persons interested to protect their rights and the manner in which those notices shall be given or served.

Assessment
of compen-
sation.

15. The Court, after hearing evidence in that behalf, shall assess the amount of compensation to be paid to the owner of the land described in the order and to all others having any just right, title, or interest, to or in the land or any portion thereof, and the compensation may take into account and may

Acquisition of Lands for Public Purposes. [Cap. 179. 2043

include any amount the Court decides to be a proper compensation for disturbance to a lessee.

16. (1) The Attorney General or anyone on his behalf and everyone interested in the land described in the order, may appear before the Court and tender any relevant evidence in support of their alleged rights and the value thereof, and may cross-examine any witness produced in an adverse interest and produce evidence to rebut any adverse testimony.

Evidence and
direction of
proceedings.

(2) The Attorney General or anyone on his behalf, or any interested person aforesaid, may summon any witnesses required.

(3) In all matters not herein expressly provided for the Court shall have full power to direct the proceedings as justice requires:

Provided that the Governor in Council may at any stage of the proceedings give notice of intention to discontinue them on paying compensation for any damage done, for any temporary occupation of the land, and for any costs incurred up to the date of withdrawal, but nothing shall in that case be awarded by way of compensation for loss of bargain or damages for breach of contract.

(4) On the notice being given to discontinue the proceedings for the acquisition of land the soil of the land shall thenceforth revert in the owner or person interested for his prior estate.

17. If the Governor in Council has not, either before or within fourteen days of the award of the Court of the amount of compensation to be paid, caused notification of the abandonment of lands entered on, or as to which proceedings have been instituted under this Ordinance, to be made in manner hereby provided, the owner thereof may, by notice in writing to the Chief Secretary, claim that land be appropriated, and the land shall then be deemed to have been definitely appropriated without the power of subsequent abandonment, and the assessed compensation therefor shall become due.

Owner may
claim ap-
propriation.

18. In determining claims for compensation for lands acquired under this Ordinance, the Court may take into consideration—

Items of
assessment
to be taken
into con-
sideration.

(a) the market value of the land at the time of awarding compensation;

(b) any damage sustained by the person interested at the time of awarding compensation by reason of severance;