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**NICARAGUA**

**RIO BLANCO-SIUNA HIGHWAY PROJECT**

**(NI0023)**

**LOAN PROPOSAL**

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NICARAGUA

Rio Blanco-Siuna Highway Project

(NI-0023)

Ministry of Public Works (MOP)

LOAN PROPOSAL

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# NICARAGUA

## BASIC ECONOMIC DATA

Area and Population	1.					2.				
	Area (thousands of km <sup>2</sup> )	Total population (thousands of inhabitants, 1977)	Inhabitants per km <sup>2</sup>	Percentage of literacy (1974)	Population growth rate (1970-76)	Percentile distribution of economically active population (1973)	National Accounts			
	139	2,282	16	53	2.9	41.4	Agriculture	24.6	23.3	22.7
						0.5	Mining	1.2	0.5	0.5
						23.2	Manufacturing	15.6	23.2	23.3
						1.3	Electricity	2.0	1.9	2.2
						2.2	Construction	5.1	5.0	4.8
						22.4	Commerce	5.7	5.5	5.4
						12.0	Transportation	7.6	7.7	8.0
						8.3	Financial services	6.9	6.6	6.4
						6.7	Other services	4.1	4.3	4.7
						15.0	Government	24.0	31.0	21.6
						20.7	Gross capital formation (percentage of GDP)	15.0	24.0	20.7
							Per capita GDP growth rate	6.4	6.4	4.9
							Total investment growth rate	3.5	8.3	3.2

3.	<u>Foreign Trade</u>	<u>1960</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
	(millions of US dollars)						
	Exports						
	Total	56.0	249.0	278.0	381.0	375.0	542.0
	LAFTA	0.2	1.8	2.3	5.4	1.8	7.0
	Andean Group	0.2	1.6	1.3	3.5	1.0	2.1
	CACM	2.5	56.2	60.3	91.5	92.6	104.0
	Latin America	3.9	61.1	66.5	100.6	96.4	114.6
	United States	28.1	82.3	94.5	73.7	105.0	170.1
	Canada	2.3	4.1	3.7	4.9	3.6	9.2
	Japan	7.9	44.9	34.2	36.1	48.7	74.8
	Great Britain	2.6	0.8	0.7	0.8	12.0	1.2
	European Common Market	18.5	38.3	51.9	100.1	81.5	109.7
	Imports						
	Total	72.0	218.0	327.0	562.0	517.0	532.0
	LAFTA	2.0	19.2	29.6	70.5	81.2	81.2
	Andean Group	0.9	13.5	19.7	32.0	67.9	70.6
	CACM	2.7	60.8	89.9	130.7	112.7	118.7
	Latin America	8.0	83.9	123.7	209.5	200.7	206.0
	United States	37.8	69.2	112.6	179.0	167.7	169.4
	Canada	1.3	3.1	3.4	5.0	3.5	4.7
	Japan	4.7	18.1	23.0	41.4	38.3	42.4
	Great Britain	3.0	7.3	7.3	15.1	12.5	7.0
	European Common Market	13.1	34.3	49.4	95.1	74.1	64.7
4.	<u>Balance of Payments</u>						
	(millions of dollars)						
	A. Balance on current account	-8.4	-21.4	-65.6	-257.1	-185.0	-65.7
	B. Long-term capital flow (net):	1.2	46.0	103.2	172.7	155.5	72.6
	Public	-0.7	29.7	57.2	91.8	80.5	32.0
	Private:	1.9	16.3	46.0	80.9	74.9	40.6
	Direct						
	Investment	1.7	10.0	13.2	13.8	10.9	11.9
	Others	0.2	6.3	32.8	67.1	64.0	28.7

5.	<u>International Monetary Reserves</u>	<u>1960</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
	(Millions of US dollars)						
	Central Bank (gross)	11.7	116.9	105.3	122.3	146.8	169.6 <u>b/</u>
6.	<u>Cost of Living Index</u>						
	Base 1970 = 100	..	..	..	..	..	..
7.	<u>Public Finances</u> <u>a/</u>						
	(Millions of cordobas)						
	Central Government current receipts	243	837	1,156	1,285	1,463 <u>c/</u>	..
	Central Government total expenditures	268	1,194	1,950	1,968	2,025 <u>c/</u>	..
	Current spending	201	648	1,007	1,130	1,203	
	Capital spending <u>W</u>	67	546	943	838	822	..
	Total surplus (+) or deficit (-)	-25	-357	-794	-683	-562	..

W Not including debt amortizations.

a/ 1960 estimated on fiscal 1959-60 and 1960-61 ending June 30.

b/ To July.

c/ Preliminary.

#### SOURCES

##### Area:

Organization of American States, América en Cifras 1972, Situación Demográfica: Estado y Movimiento de la Población

##### Tótal population:

IDB estimate based on official national statistics.

##### Literacy:

Data supplied to IDB by Central Bank of Nicaragua in January 1976.

##### Economically active population:

IDB estimate based on information from International Labour Office, Anuario de Estadísticas del Trabajo, 1964 and 1971

Gross domestic product:

IDB estimate based on information supplied by Central Bank in  
October 1977

Foreign Trade:

Export and imports:

Total: International Monetary Fund, International Financial Statistics,  
January 1969 and October 1977

Breakdown by groups and individual countries:

International Monetary Fund, Direction of Trade Annual 1960-64  
and 1970-76

Balance of payments:

International Monetary Fund, Balance of Payments Yearbook (computer  
tapes, September 1977)

International monetary reserves:

International Monetary Fund, International Financial Statistics, May 1976  
and October 1977

Public Finances:

Banco Central de Nicaragua, Departamento de Estudios Económicos, Informe  
Anual 1976

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Symbols

.. Unavailable

- Zero or less than half of last digit used.

NICARAGUA: NI-0023

Rio Blanco-Siuna Highway Project

I. THE PROJECT

A. Frame of Reference

1. Characteristics of the Transport Sector in Nicaragua

- 1.01 The transportation sector in Nicaragua is characterized by maritime transport, served principally by two ports on the Pacific and three smaller ones on the Atlantic; rail transport via a network with a total length of 319 Kms.; air transport, served by one international airport, eight airports for internal service and numerous landing strips for light aircraft; and land transport, through a network of roads and highways that had a total length of 17,446 Kms. at the end of 1976.
- 1.02 The highway system provides the most important means of transportation in the country, carrying about 3/4 of all national cargo. The system has expanded rapidly since 1940, at which time the country only had 201 Kms. of highways and roads, growing at a geometric rate of 10% during the last ten years.
- 1.03 About 94% of the entire national highway network is located in the Pacific and Central Regions of the country. Presently, the Atlantic area has only one penetration road which originates in the Municipality of Chontales and goes to El Rama, a small city located in the southern part of the Department of Zelaya, some 50 Kms. from the coast. There do exist some short roads in the towns of Puerto Cabezas and Waspán in the northern part of the Atlantic area, but the rest of it only has trails which can be used by mules during the dry season, which lasts about four months every year.
- 1.04 With highways that are passable during the entire year that connect Managua, Corinto, and Puerto Somoza with the more important cities in the Pacific and Central Regions, the highway system in these areas has apparently been completed. In the future, development of the system would be oriented towards the Atlantic, where, for climatic reasons, torrential flows in the rivers and because of normally heavy rainfall, as well as the lack of basic infrastructure, the work to be done will be more costly and difficult to realize. However, it is in this area that Nicaragua has enormous potential for expanding the agricultural production base of the country, as the same climatic conditions that complicate the execution of investment projects in infrastructure, give an impetus to agricultural exploitation, as well as improving soil conditions.

- 1.05 Realizing the potential of the Atlantic zone, in 1975 the Government, with its own resources, began construction of a penetration road in northern Zelaya, to provide land communication for the first time between the cities of Siuna, La Rosita, Bonanza and Puerto Cabezas. This road, of minimum technical specifications and the termination of which is foreseen for the end of 1978, would contribute to the opening up and encouragement of agricultural production in this vast area of the country, via eventual colonization. In the distant future, Puerto Cabezas could be expanded when the volume of products that could be shipped abroad from this port would justify the necessary investments. Siuna, however, is not connected to the national highway system, the route from Siuna to Río Blanco being the only link needed so that the northern part of Zelaya will have land communication with the more developed Pacific and Central Regions.
- 1.06 In addition to the above and according to the Government's plans for the future development of the Atlantic zone, the most important transportation sector projects in the near future will be those having to do with the construction of penetration roads and farm-to-market roads, with the hope that approximately 3,000 Kms. will be built between 1979 and 1985; the construction of a highway between Acoyapa and San Carlos in the south; and the improvement, and partial reconstruction, of the road between Río Blanco and Boaco.
- 1.07 The current "National Reconstruction and Development Plan 1975-1979" of the Government of Nicaragua, establishes an annual target growth rate of 6.1% in Gross Domestic Product (GDP) for the economy as a whole. The agricultural sector, with an annual average growth rate of 5.5% for the five-year period, has a special effect on the Plan because of its relative participation in GDP, its contribution to total export value, and because of its capacity to generate employment. The strategy to be followed in the sector is the one that would tend to expand and fortify the production of basic foodstuffs for internal consumption, to contribute to an improvement in the balance of payments, and to supply raw materials for industrial development. In order to accomplish this, emphasis is placed on the opening of new land in the Atlantic area, through highway, farm-to-market road, colonization, and land grant programs, as well as on support services such as: agricultural credit, intensive production of basic grains, irrigation, technical assistance for the benefit of settlers, etc.
- 1.08 In accordance with the general guidelines of the above-mentioned Plan, at the end of 1976 the MOP finished preparing a "National Transportation Plan for Nicaragua" (NTPN), which, in effect, is a prefeasibility study that defines how the transport sector in general would be developed during the next 20 years. As far as the highway network is concerned, the NTPN identifies three action plans -an immediate one, another covering a period of ten years, and the last a period of 20 years. The immediate action plan deals mainly with the construction and improvement of penetration and farm-to-market roads located mainly in the Atlantic and Central Regions of the country, all this with the idea of fortifying agricultural production. The NTPN assigns high priority to construction of the Río Blanco-Siuna, Siuna-La Rosita-Puerto Cabezas highways in the north, the Acoyapa-



San Carlos highway in the south, and to the preparation of a program involving the construction of approximately 1,000 Kms. of farm-to-market roads in and around the areas of influence of the above-mentioned highways. The NTPN also contemplates the expansion of the rural and local road network in the Central Region, with the idea that these roads would serve as connecting routes to the markets and ports on the Pacific, and as a complement to the national highway system. Basically, the 10-year action plan contemplates a large-scale expansion of the immediate action program, with the main emphasis being on the generation of new rural and farm-to-market road projects. However, the construction and improvement of certain principal highways in the Pacific area is also considered for this phase, these projects becoming necessary once traffic flow in general is increased in the country. The 20-year action plan is less precise, but points out the possibility of building principal highways to the Atlantic ports and improvement and expansion of the Panamerican Highway.

- 1.09 It is worth mentioning that the Central American Transport Study, which has not yet been finished, does not comment on the Río Blanco-Siuna highway in its list of recommended projects. This is due to the fact that the study is only concerned with the regional transportation system on the isthmus, and does not investigate the feasibility of a local road, or penetration roads in sparsely populated areas, as would be the case with the Río Blanco-Siuna highway.

## 2. Area of Influence of the Río Blanco-Siuna Highway

- 1.10 The Río Blanco-Siuna highway, the construction of which is proposed in this report, would have a total length of approximately 116 Kms. It would be a penetration road and would be situated to the east of the foothills of the mountains that divide the country in two basic parts --the Pacific and the Atlantic. It would run from the town of Río Blanco at its southern-most point, passing through the village of Caño Waspi before terminating in Siuna, at its northern extreme. The road would cross some 15 rivers that flow towards the Atlantic.
- 1.11 Unless a complementary system of secondary penetration roads is created, the area upon which the highway would affect agricultural activity would be no greater than the distance that a mule could travel in a day. Due to the characteristics of the land, in the case of the Río Blanco-Siuna road, this area would be approximately 15 Kms. wide on each side of the highway itself, except in the western region near Siuna, where it would be increased to 20 Kms. The area described covers 351,000 Has., of which 35% are located in the Municipality of Siuna, 33% in the Municipality of La Cruz de Río Grande, 23% in the Municipality of Paiwás and 9% in the Municipality of Río Blanco. Total population in the area is estimated to be about 14,000 inhabitants, including the towns of Río Blanco and Siuna where slightly more than half of these people live.
- 1.12 A large part of the territory covered by the area of influence is Government land, still in its natural state. Colonization has been a spontaneous process and legal title has been granted on only about 27% of the

land included in the area of influence. Agricultural activity is conducted basically at a subsistence level, consists of the cutting and burning of fields and in the rotation of basic grain crops: principally corn, beans and rice. The typical farmer manages his own plot, and normally can only count on the members of his own family for labor, which permits him to cultivate about 1 to 2 Has. at a time. Every two years a new section has to be cleared of its original vegetation and prepared for cultivation, while the parcel that was being used is left unworked for five to seven years for purposes of recuperation. The majority of the farmers own one or two heads of cattle, although in the area near Río Blanco cattle breeding has grown more rapidly and there are larger herds.

### 3. Land Ownership

- 1.13 The Instituto Agrario de Nicaragua (IAN), an autonomous state entity, is the institution responsible for promoting and supervising colonization in new agricultural areas in Nicaragua, via the execution of specific colonization and land titling projects. In order that the IAN can carry out its work, the State has given it the exclusive right to take land under its control for later agricultural development and for titling it in favor of interested settlers. In the project's area of influence, the IAN presently has some 56% of the surface area under its control and is conducting a land titling project in it. Called the Siuna Project, about half the land area that it encompasses has already been titled and the end of the program is scheduled for 1979. In addition, the IAN has identified two projects that it feels it would be able to execute in the future within the area of influence. The Matiguás Project would cover some 30% of the area and the Río Bijao-Somoza García Project, about 5%. Both are colonization projects which would be based on individual lots of 50 manzanas (1 manzana = 0.71 hectares), with 40 manzanas in grasses, and 10 in basic grains. Implementation of these two projects would not be made in the near future, given the fact that the feasibility study for the Río Bijao-Somoza García project, only, has recently been initiated.
- 1.14 Thus, the IAN does have the legal capacity to issue titles on 56% of the area of influence of the proposed project. Titles on 27% of the area have already been issued, the remaining 29% being under the control of IAN for granting of titles during 1978 and 1979. As far as the remaining 44% of the area of influence is concerned, no titles have been issued and the land is owned by the State. It is felt that in order to assure the continuity of the issuance of titles in the road's area of influence, this 44% should be passed on to IAN. Consequently, it is recommended that prior to the signing of an eventual loan contract, the Government effect the necessary transfer, sending proper proof of same to the Bank.
- 1.15 The Agrarian Reform Law in Nicaragua, in the section dealing with issuance of land titles, in areas of colonization and titling projects carried out by IAN, classifies the land in six categories according to relative quality. The law provides the maximum size of a farm cannot be greater than 500 Has. of first class land. To determine the maximum size of farms on land of less quality, from second class to sixth, multiples of this basic

figure are used, defining the equivalents of land as a function of first class. These multiples are: 1.4 for second-class land; 2 for third; 3.3 for fourth; 5 for fifth; and 10 for sixth. However, in practice, the IAN, in its colonization projects, determines the size of farm that would provide a reasonable family income in each case and establishes a maximum size in terms of Has., or manzanas, of a family unit that can be titled within the area of the project being carried out. In the case of the Rigoberto Cabezas project, 1/ for example, the family unit was defined as a maximum of 30 Has. of first class land.

- 1.16 The IAN estimates that in the area of influence of the Río Blanco-Siuna road, a family unit can be defined as 50 manzanas (35.2 Has.) of first class land, and is focusing its future colonization projects in Río Bijao-Somoza García and Matiguás on this figure. In the Siuna area, IAN has issued titles on larger properties, given that the owners were already established there and the units were under production.
- 1.17 In mid-1976, the consultants that prepared the economic feasibility study for the Río Blanco-Siuna road conducted a survey of farmers located close to the northern and southern ends of the proposed route. The survey included information on the size of farms, the use to which the land was put, production and sales levels. The IAN has issued titles on 114,880 Has. (163,129.6 manzanas) in the Siuna area, of which 94,000 Has. (113,480 manzanas) would be included within the project's area of influence. The distribution of titled farms by size, as well as by an estimation of average gross income, is shown in the following table:

IAN - Siuna Project: Distribution of Farms

<u>Rank</u> <u>Manzanas a/</u>	<u>N° of</u> <u>Farms</u>	<u>Total Area</u> <u>Manzanas a/</u>	<u>%</u>	<u>Aver. Size</u> <u>Manzanas a/</u>	<u>Aver. Gross</u> <u>Income US\$ b/</u>
0 - 10	8	58.7	0.0	7.3	438
11 - 20	5	75.5	0.1	15.1	906
21 - 50	68	2,808.6	1.7	41.3	1,342
51 - 100	239	17,946.5	11.0	75.1	2,328
101 - 200	300	42,794.7	26.2	142.6	2,514
201 - 300	146	35,610.4	21.8	243.9	4,226
301 - 500	100	38,790.3	23.8	387.9	4,766
Más de 500	34	25,044.9	15.4	736.6	9,050
Totals	900	163,129.6	100.0	181.3	3,051

a/ 1.42 manzanas = 1.0 Ha.

b/ Estimated in accordance with the average gross income per manzana indicated in Appendix A of the Project Report.

1/ Financed partially by the Bank with Loan 372/SF-NI.

- 1.18 In the Río Blanco area, where the farmers do not have legal title to their land, 71 interviews were conducted, covering 19,154 manzanas, which corresponds to 13% of the total area between Río Blanco and Río Tuma. Distribution of farms by size is shown in the following chart:

Río Blanco-Río Tuma Zone: Distribution of Farms

<u>Rank Manzanas</u>	<u>N° of Farms</u>	<u>Total Area Manzanas</u>	<u>%</u>	<u>Aver. Size Manzanas</u>	<u>Aver. Gross Income US\$</u>
0 - 10	4	40	0.2	10.0	682
11 - 20	4	66	0.3	16.5	588
21 - 50	8	345	1.8	43.1	1,010
51 - 100	13	1,123	5.9	86.4	3,907
101 - 200	15	2,490	13.0	166.0	2,772
201 - 300	8	2,350	12.3	293.8	6,949
301 - 500	9	4,040	21.1	448.9	10,571
Más de 500	10	8,700	45.4	870.0	23,028
Totals	71	19,154	100.0	269.8	6,873

#### 4. Ecological Aspects

- 1.19 It is felt that construction of the Río Blanco-Siuna highway would not have negative ecological effects in the area, but rather would provide an incentive for the rational exploitation of it. The only thing that could be identified as a possible problem in this sense would be the effect that future colonization would have on the area. It is relatively common, for example, that upon establishing themselves in new agricultural areas in Nicaragua, settlers clean off or burn large extensions of land, damaging forest reserves in the process. Although the IAN realizes the problem and tries to convince the settlers that in the long run this type of exploitation is not in their own best interest, sufficient controls do not exist.
- 1.20 On the other hand, the Government of Nicaragua and the Bank have an active interest in forestry in the country, recognizing the great economic importance that this represents. Currently, the Bank is financing a pilot forestation and fire control project through loan 397/SF-NI, for the equivalent of US\$1.5 million, the project being executed by the Instituto de Fomento Nacional (INFONAC). This project is located in the northeast area of the country, near Puerto Cabezas, and INFONAC is studying a large expansion of it for 1979. If it is expanded, the project could eventually encompass part of, or at least be near, the area of influence of the Río Blanco-Siuna highway.
- 1.21 In part for this reason, and recognizing the importance of conserving the country's forest reserves, it is recommended that an eventual loan contract incorporate a condition that obligates the Government to assure that in its colonization programs in the area of the road, the IAN designate forest

reserve areas and establish a control mechanism to assure that the settlers manage the reserves on their farms in such a way as to not damage them.

#### 5. Justification of the Use of FSO Resources

- 1.22 Minimum salaries in the agricultural sector in Nicaragua amount to approximately US\$900 per year, including certain non-monetary payments. <sup>1/</sup> In accordance with the criteria established in Document GP-2 on the eligibility of farms for financing with resources of the Fund for Special Operations (FSO), the maximum limit would be defined as gross income per farm being equivalent to ten times minimum annual salaries, which in this case would be US\$9,000. In the case of the Siuna project, only 4% of the farms on which there are legal titles, with 15% of the total land, would be over the eligibility criteria for farms financed with FSO resources.
- 1.23 In the area between Río Blanco and Río Tuma, 73% of the farms would have gross income of less than US\$9,000 a year and would be eligible to be financed with FSO resources. However, these farms would cover only about 34% of the total area. On farms larger than 300 manzanas, 38% of the area is not in use; that is to say, it is virgin land or has been left untilled. Further, since no one has legal title to the land, the IAN has stated that there would be no difficulty in following the policy of issuing title to the land on the basis of family units only in this part of the area of influence of the project, as well as in the part not yet titled in the Siuna area. The result would be that all of the untitled land area would encompass farms that would be eligible for FSO financing, and only about 8% of the land in the entire area of influence would be occupied by farms with a potential gross income of over US\$9,000, this in the Siuna area on land already titled.

#### B. Objectives and Description

- 1.24 The project would have as its principal objectives that of providing land access to a part of the Atlantic area of the country for the purpose of augmenting, via small units of private property, the profitable exploitation of agricultural resources in this isolated zone, that offers favorable conditions for development. The second objective would be to connect the northeast region of the country, which currently has no land communication facilities with the rest of Nicaragua, with the existing highway system in the country, thus providing the first land route between the two oceans in Nicaragua. The project would consist of the construction of a road of 116 Kms. in length, including 15 bridges, between Río Blanco, already connected by road to Managua, and the town of Siuna, from which other segments of highway are under construction to Puerto Cabezas on the Atlantic coast.

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<sup>1/</sup> The minimum legal salary is 15 córdobas per day. In addition, employers have the obligation to facilitate housing and food, which for tax purposes is calculated at 10 córdobas per day. Assuming 250 work days, one would arrive at US\$893 per year.

C. The Borrower

1.25 The borrower would be the Republic of Nicaragua.

D. Executing Agency

1.26 The executing agency for the project would be the Ministry of Public Works (MOP), through the Dirección General de Caminos (DGC). In addition to its own personnel, the MOP would contract the services of a consulting engineering firm to supervise civil works and to administer the financial and accounting aspects of the project.

E. Terms and Conditions of the Loan

1.27 In order to partially finance the proposed project, it is recommended in this summary that the Bank extend a loan for the equivalent of US\$32 million from the Fund for Special Operations (FSO). This loan would be granted for a term of 40 years, including a 10-year grace period, at 1% per annum during the grace period and at 2% per annum during the rest of the repayment period, and with a credit commission of 1/2% on undisbursed balances.

II. COST AND FINANCING

A. Total Cost of the Project

1. The total cost of the project would be US\$43 million, or equivalent, as shown in the following table:

(In thousands of US\$ or equivalent)

Categories	Exchange Foreign Costs	Local Currency Costs	Total	%
1. Engineering and Administ.	400	2,100	2,500	5.8
2. Direct Construction Costs	11,800	12,300	24,100	56.0
3. Financial Costs	1,110	50	1,160	2.7
4. Concurrent Costs	-	30	30	0.1
5. Contingencies	7,290	7,920	15,210	35.4
Total	20,600 <u>a/</u>	22,400	43,000	100.0
Percentages	47.9	52.1	100.0	

a/ Includes US\$13,300,000 in indirect foreign exchange costs.

B. Project Financing

- 2.02 The project would be financed in accordance with the data shown in Section III of Appendix III of this proposal. Taking into account the current availability of córdobas in the FSO, the origin and use of currencies to be utilized in financing the project would be as follows:

(In thousands of US\$ or equivalent)

Source	Origin of Currencies		Use of Currencies		Total	%
	For.Exch.	Local	For.Exch.	Local		
IDB-FSO	29,500	2,500	20,380 <u>a/</u>	11,620 <u>b/</u>	32,000	74.4
Local Counterpart	-	11,000	220 <u>c/</u>	10,780	11,000	25.6
Total	29,500	13,500	20,600	22,400	43,000	100.0
Percentages	68.6	31.4	47.9	52.1	100.0	

a/ Includes the equivalent of US\$13,300,000 as estimated indirect foreign exchange costs.

b/ Dollars that would be utilized to pay local costs represent 30.9% of the amount of the eventual loan in foreign exchange.

c/ Corresponds to the credit commission.

- 2.03 With the resources of an eventual loan, the Bank would contribute to the project via the financing of all external costs, both direct and indirect with the exception of the credit commission, for a total of US\$20,380,000, or equivalent; of the local cost corresponding to the contracting of an engineering firm for supervision and control of construction for the equivalent US\$2 million; part of the local costs involved in direct construction, provisions for price increases and contingencies for the equivalent of US\$9,570,000; interest and inspection and supervisory functions in local currency for the equivalent of US\$50,000. The Government of Nicaragua, with its counterpart contribution of the equivalent of US\$11 million, would cover the foreign exchange costs calculated at US\$220,000 for the credit commission, and all other costs of local origin, which are estimated at the equivalent of US\$10,780,000.
- 2.04 As indicated in paragraph 2.01 of this summary, local currency costs for the project make up 52.1% of the total, being due in great measure to local material (sand, wood, stone, etc.) and labor costs which would be used in the construction of the road; to the provisions for price increases and contingencies; and to the local cost portion for the contracting of a supervisory firm. At the same time, the availability of córdobas in the FSO is quite limited, there being only the equivalent of US\$2.5 million of that currency that could be used to finance part of this project. If the Bank were to finance only this amount in local costs plus the external component (US\$20,380,000), the result would be

that an eventual loan of the Bank would cover only 53.2% of the total cost of the project. Considering that Nicaragua is included among the less relatively developed countries and that the beneficiaries of the project would be low-income farmers, the financing plan described in paragraph 2.02 is proposed.

### III. PROJECT EXECUTION

#### A. Technical Aspects

##### 1. Status of Studies and Designs

- 3.01 The technical, economic and financial feasibility studies for the Río Blanco-Siuna road were prepared during the years 1976 and 1977 by the firm Berger-Consulnic. The same firm also prepared the final designs for the project. It is felt that the studies and designs were prepared according to excepted engineering practices; that they adequately reflect a reasonable dimension and scope of the proposed project; and that they comply with Bank requirements in this area. The economic feasibility study indicates that the project would have an internal rate of economic return of 12.2%.

##### 2. Preliminary Execution Plan (PEP)

- 3.02 The Executing Agency has prepared a preliminary Project Execution Plan (PEP), which has been useful in determining the size of the proposed project and the manner and time frames in which it would be executed. The final PEP for this project would be submitted to the Bank prior to the signing of an eventual loan contract and would constitute the basis for following the development of project execution on the part of the Bank, as well as on the part of the borrower and executing agency.

##### 3. Supervision and Control of Works

- 3.03 Supervision and control of works, as well as financial and accounting administration of the project, would be carried out by a consulting engineering firm, that would be contracted by the MOP prior to the first disbursement of the eventual loan, in accordance with Bank practice, and with dispositions currently in effect in Nicaragua. The MOP will present to the Bank, for its approval, the terms of reference that would govern the activities and responsibilities of the consulting firm, as well as its history, and eventually the contract to be signed between the parties. For its part, the DGC will have a project coordinator and additional personnel responsible to the Director of the DGC, which would exercise a general coordinating function between the executing agency and the Bank.

##### 4. Period of Execution and Investment Schedule

- 3.04 In accordance with the schedule of activities in the preliminary PEP, it is recommended that an eventual loan contract establish a period of five years for complete execution of the proposed project, fixing the term for last disbursement of loan resources at five years counting from the validity date of the contract.



- 3.05 This recommendation is based on the fact that the area in which the road would be constructed is characterized by constant rainfall during some eight months of the year, with the result that the contractor, or contractors, can work only from February to June under the best of circumstances. In addition, access to this area is very difficult, it being possible to get to Río Blanco by road, but to Siuna only by river and in part by road. It is worth mentioning that the project includes the construction of 15 bridges with a total length of 783 meters, execution of which is limited to about 115 days per year.
- 3.06 Taking this into account, and with the idea of assuring termination of the project within five years, the DGC will require that the contractor, or contractors, work on two fronts: one section that would be initiated in Siuna, proceeding south to Caño Waspi, with a length 48.6 Kms.; and another that would be initiated in Río Blanco, progressing north to Caño Waspi, with a length 67.6 Kms.
- 3.07 In both cases, it is felt that, in terms of the validity date of an eventual loan contract, periods of six months for the contracting of the supervisory firm; two months for the firm to prepare bidding documents; eight months to effect public bidding; and 41 months for construction of the Río Blanco-Caño Waspi section and 43 months (two months more), to construct the Siuna-Caño Waspi section, would be needed. Therefore, the construction period for the Río Blanco-Caño Waspi section would be 57 months and that for the Siuna-Caño Waspi section, 59 months.
- 3.08 It has been estimated that investments in the project would be effected in accordance with the following approximate schedule:

(In thousands of US\$ or equivalent)

Source	Y E A R S					Total	%
	1st.	2d.	3rd.	4th.	5th.		
Bank	280	6,770	7,910	8,020	9,020	32,000	74.4
Local Counterpart	50	2,400	2,710	2,700	3,140	11,000	25.6
Total	330	9,170	10,620	10,720	12,160	43,000	100.0
Percentages	0.8	21.3	24.7	24.9	28.3	100.0	

## 5. Bidding

- 3.09 In accordance with the terms of the bidding procedure which is included as Appendix B of the Project Report, the awarding of the contract, or contracts, for the construction of the road would be done via international public bidding. Due to the lack of local firms that are large enough to be able to execute the volume of work foreseen for the project during the

construction period, it is most probable that the contracts would be awarded to foreign firms, or to foreign and local consortia. There are three North American firms that generally participate in the DGC's bids, as well as some others that operate in the Central American area that participate on an occasional basis. Firms from Costa Rica have expressed an interest in participating in work of this type in Nicaragua. Based on the experience of the MOP/DGC in bidding out other large highway projects (such as: Managua-Corinto, León-Matagalpa, Interamerican Highway, etc.), and given the size of the contract, or contracts, that would be awarded for the construction of the Río Blanco-Siuna highway, it is felt that there would be a sufficient number of interested firms so as to assure a good number of offers as well as healthy competition.

- 3.10 As has been mentioned before, the possible highway project has been divided into two parts, or sections, in order to assure efficient execution of the total amount of works. It is felt that it would be advisable to permit the submission of offers for the construction of one or of both sections of the road, with the understanding that in the judgement of the MOP/DGC and the Bank this would result in a benefit for the execution of the project, and that the firms submitting such offers would have been prequalified to take on these amounts of work simultaneously. Based on estimated construction costs in 1977, the two sections that would be bid are as follows:

	<u>Length</u>	<u>Cost</u> <u>(In thousands of US\$)</u>	<u>%</u> <u>Cost</u>
Siuna-Caño Waspi	48.6 Kms.	9,980	41.4
Río Blanco-Caño Waspi	67.5 Kms.	14,120	58.6
	<u>116.1 Kms.</u>	<u>24,100</u>	<u>100.0</u>

#### 6. Maintenance

- 3.11 The MOP is responsible for the maintenance of all roads and highways in the country, this function being carried out through the DGC. Historically, the major portion of maintenance work has been done directly by the DGC, utilizing its own machinery for this purpose. At times the DGC has contracted out certain maintenance work to private firms, as for example, preventive work such as the installation of a new asphalt road surface.
- 3.12 Based on evaluations of this activity and inspections performed by the Bank, it is felt that maintenance work has been done in a satisfactory manner. It has been found that the feeder roads financed with resources of loan 63/SF-NI in the northern part of the Pacific and Central regions of the country, have been conserved quite well, in spite of heavy rainfall in the area and the diversion of equipment to Managua for demolition purposes following the earthquake that destroyed that city in December of 1972.

- 3.13 Further, no problems have been detected in the past with respect to the opportune appropriation of budgetary resources for this activity. In order to give an idea of what would be necessary as far as funds are concerned for proper maintenance of the highway project proposed in this summary, a density of 300 vehicles per day has been considered in the calculations, 50% of the vehicles being trucks, average grades of 5% and rainfall continuously during eight to nine months of the year. The result is a conservation cost for the Río Blanco-Siuna road of the equivalent of US\$1,900 per Km. per year for routine maintenance and US\$1,200 per Km. per year for preventive maintenance.
- 3.14 Taking into account past experience and considering that the MOP/DGC has sufficient machinery and equipment available for maintenance of the national road network, difficulties in assuring adequate maintenance of the Río Blanco-Siuna highway are not foreseen. It is recommended, therefore, that the normal clauses dealing with this aspect be incorporated in Annex A of an eventual loan contract, a draft of said annex being presented as Appendix III of this proposal.

#### 7. Ex-post Evaluation of the Project

- 3.15 At the option of the Bank an ex-post evaluation of the project would be made five years after final disbursement of an eventual loan. Also, within 18 months from the validity date of an eventual contract, the borrower will submit to the consideration of the Bank, a report that explains the system that would be used to gather the annual data comparisons, as well as the base-line data that would be used to measure the socio-economic benefits of the project.
- 3.16 In addition, two years after the validity date of an eventual contract, and annually from that date on through the fourth year after final disbursement of the loan, the borrower will present the annual data to the Bank, it being necessary that these data cover at least the following aspects:
- (i) Traffic count with a minimum duration of one week, adequately adjusted to consider the day of the week, month and season (rainy season, dry season, harvest, etc.);
  - (ii) Classification of the type of traffic by class of vehicle, weight and average operating velocity;
  - (iii) Data on freight shipments, origin, volume and destination of vehicles, both passenger and commercial;
  - (iv) Inventory of the condition of the road surface, drainage, signals, bridges and maintenance activities; and
  - (v) Data on traffic accidents.

3.17 Since the road will be constructed in underdeveloped areas, and one of the objectives of the project is precisely to contribute to an increase in agricultural production and socio-economic infrastructure investments, in addition to the information specified in paragraph 3.16 above, the following will also be required:

- (i) Agricultural production by type of crop and area;
- (ii) Production and freight costs of principal products;
- (iii) Prices paid and received by farmers;
- (iv) Inventory and cost of additional social or economic investments (such as, among other things, warehouse installations, schools, potable water, and electricity); and
- (v) Size and number of agricultural family units titled by the IAN.

B. Financial and Institutional Aspects

3.18 It is felt that the MOP/DGC has sufficiently qualified personnel so as to assure adequate supervision over the technical and financial aspects of the proposed project. It should be remembered that the Ministry would contract the services of a supervisory firm which will have direct responsibility for the supervision of all project works, as well as for administrative and accounting control. As far as the Ministry is concerned it would only be necessary to have a Project Coordinator that would be responsible for coordination between the MOP, the supervisory firm and the Bank.

3.19 As required by conditions extant in prior loan contracts with the Bank and other international agencies, the MOP has always presented financial statements audited by independent accountants. It is recommended in this case that the same procedure be followed, and that an eventual loan contract provide that the project's financial statements be audited by an independent firm, chosen by the Tribunal de Cuentas.

C. Legal Aspects

3.20 Practically all of the route of the proposed highway passes through unoccupied or state land. As a result, no right-of-way problems that would impede efficient execution of works, for example, relocation of families, are anticipated. Within the local counterpart contribution to the project, a reserve amount of US\$30,000 has been included in the budget to pay for land or other properties that may be necessary for the project. Nonetheless, and in order to assure that during the execution period no difficulties with right of way arise, it is recommended that an eventual loan contract include provisions that obligate the MOP/DGC to demonstrate to the Bank that it has legal possession of the land over which the road will pass, this prior to calling for bids.

- 3.21 No capital gains or improvements tax legislation exists in Nicaragua. However, in accordance with the Real Estate Tax Law, published in the official newspaper on November 26, 1974, a real estate tax of 1% of the assessment value as of June 30 immediately prior to payment date does exist. In practice, this law is not applied in rural areas of Nicaragua, and there appears to be no possibility for its application in these areas in the near future. At any rate, one should not insist on its application in the project zone given that: (i) the road will serve the existing small farmer population which is using national land but without having legal title to it. Upon construction of the road, the Government will issue titles to these farmers as well as to others that enter the area later. There is nothing to indicate that a small number of land-owners will receive greater benefits than others in the area; and (ii) a large part of the land is state-owned, the State being the principal beneficiary.

#### IV. JUSTIFICATION FOR THE PROJECT

##### A. Technical Viability

- 4.01 Taking into account that the studies and final designs have been 100% completed; that the highway's construction costs have been calculated realistically; that technical, administrative and financial supervision and control will be contracted out to a consulting engineering firm; and that the specifications that would be used in the execution of works are adequate for a penetration road, it is considered that the successful execution of the project would be feasible within the term recommended in this summary and in accordance with the investment schedule presented in paragraph 3.08.

##### B. Socio-economic Justification

- 4.02 The Río Blanco-Siuna highway would be a penetration road which would help to incorporate new agricultural land into the national economy. Its potential for development has been proven through soil, hydrolic and weather studies. The land within the area of influence is hilly, and relatively well-drained compared to other areas in the eastern part of the country, that are almost always flooded. Agricultural development support services such as extension facilities, credit and commercialization, exist at the two extremes of the region in Siuna and Río Blanco. The principal limiting factor as far as incorporating this land into agricultural development is concerned, is the difficulty relating to transport, which does not permit adequate access to markets.
- 4.03 The Río Blanco-Siuna highway would provide the missing link to connect Puerto Cabezas and the northern part of the Atlantic region of the country with the more developed Pacific region by land. Its impact will be felt, then, not only in the direct area of influence, but also in the entire Atlantic region.

- 4.04 Based on projected increases in agricultural production and on savings that users would realize over marine and air traffic, the present discounted value of the economic benefits of 12% is greater than the economic costs. The internal rate of return is 12.2%. These results can be considered to be conservative, since the economic benefits resulting from access to services such as education, health, etc., for the local population have not been quantified, nor have the effects on local non agricultural production. Therefore, the project would be economically favorable for the country.

V. EVALUATION OF PREVIOUS OPERATIONS

A. Loans 63/SF-NI and 305/SF-NI

- 5.01 Loan 63/SF-NI to the Republic of Nicaragua was granted by the Bank on September 27, 1965, for the equivalent of US\$12 million, to partially finance a rural highway improvement and construction program in various areas of the country, with the length of the roads totalling approximately 458 Kms. 386 Kms. were built and 72 Kms. of roads were improved with resources of the program at a total cost equivalent to US\$18,150,000. This loan was evaluated on occasion of the presentation of Document PR-776, dated November 23, 1976, which contained the analysis of the second stage of the rural roads program in the country (loan 491/SF-NI).
- 5.02 On September 2, 1971, the Bank approved loan 305/SF-NI to the Republic of Nicaragua, for the equivalent of US\$3.5 million to cooperate in the expansion and strengthening of the highway maintenance system in the country, via the acquisition of machinery and equipment, the construction of camps and repair shops, and the granting of technical cooperation for the strengthening and reorganization of the DGC's financial administration system (ATP/SF-1135-NI). An evaluation of this operation was also included in document PR-776 already mentioned, but at that time, construction of the camps and repair shops had not been finished.
- 5.03 Upon finishing the execution of the above-mentioned operation in December of 1976, a total of 12 camps and 10 repair shops had been constructed in various key points in the national highway system. It is considered that the objectives of the program were satisfactorily met, and that the recommendations made by the consultants contracted with resources of the technical assistance part of the loan, are being implemented in a satisfactory manner.

B. Technical Cooperation ATC/TF(SP)-1295-NI

- 5.04 In June of 1974 the Bank granted this technical cooperation to the MOP for the equivalent of US\$750,000, to partially finance the cost of technical and economic feasibility studies for approximately 600 Kms. of rural roads,, of which approximately 300 Kms. of the more viable ones were selected, following selection criteria established in agreement with the Bank. Those studies and plans served as the basis for the preparation of an

investment program consisting of the second stage of the rural road program, in which the Bank has cooperated via the approval of additional financing (loan 491/SF-NI). This technical cooperation was fully disbursed on November 15, 1977.

C. Loan 491/SF-NI

- 5.05 This loan was granted to the Republic of Nicaragua on December 9, 1976, for the equivalent of US\$18 million, to finance a construction and improvement program of approximately 300 Kms. of rural roads in the Pacific and Central regions of the country. There has been no activity under this loan up to the present time, the borrower and Executing Agency presently being in the stage of complying with the various conditions prior to first disbursement. The term for this expires on December 3, 1977, and it is felt that these activities are being well taken care of by both entities.
- 5.06 By way of information, this operation will consist, tentatively, in the construction and improvement of 10 rural roads with a total length of approximately 300 Kms., in accordance with a preliminary list contained in the loan contract, and which are the following:

<u>Road</u>	<u>Length (Km.)</u>
1. Somotillo-Cinco Pinos	30.0
2. Villa Salvadorita-Malpaisillo	29.5
3. Limay-Pueblo Nuevo	24.7
4. El Sauce-Villanueva	40.6
5. Juigalpa-La Libertad	33.0
6. Asturias-Pantasma	24.7
7. Abisinia-Bocaycito	27.0
8. S.J. del Río Coco-Wiwilí	55.6
9. Rivas-Veracruz	5.7
10. San Cayetano-La Trinidad	<u>31.5</u>
Total	<u><u>302.3</u></u>

PROPOSED RESOLUTION

NICARAGUA. LOAN /SF-NI TO THE REPUBLIC OF NICARAGUA  
(Río Blanco-Siuna Road Project)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Nicaragua for the purpose of granting it financing to cooperate in the execution of a project consisting of the construction of a road approximately 116 kilometers long between the localities of Río Blanco and Siuna. This financing shall be subject substantially to the following conditions:

1. Amount and Currencies: Up to US\$32,000,000 or the equivalent in other currencies which are part of the Fund for Special Operations, of which amount; (a) up to US\$29,500,000 or the equivalent in other currencies (except that of Nicaragua) shall be disbursed to pay for goods and services acquired through international competition in member countries of the Bank and for such other purposes as may be specified in the loan contract; and (b) up to the equivalent of US\$2,500,000 shall be disbursed in cordobas to cover local expenses. Payments of amortization and interest shall be effected in the respective currencies disbursed.
2. Source of Funds: Th Fund for Special Operations.
3. Guarantee: The general responsibility of the borrower.
4. Credit Fee: 1/2 of 1% per annum on the undisbursed portion of the sum indicated in subparagraph 1(a) of this resolution, commencing to accrue 12 months after the date of this resolution. The fee shall be paid in dollars of the United States of America on the same dates as the interest.
5. Amortization: The borrower shall amortize the loan in a period of 40 years from the date of the contract, by means of



consecutive, semiannual and, so far as possible, equal installments. The first installment shall be paid 10-1/2 years after the date of the contract.

6. Interest: 1% per annum during the first 10 years after the date of the contract and 2% per annum thereafter. Interest shall be payable semiannually on principal amounts outstanding, and the first payment shall be made six months after the date of the contract. At the request of the borrower, resources from the financing may be used to pay the interest during the disbursement period thereof.
7. Disbursement: Total disbursement of the financing shall be made within a period of 5 years after the effective date of the contract.
8. Special Conditions:
  - (a) The resources of the loan shall be utilized in their entirety by the Ministerio de Obras Publicas (MOP) through the Direccion General de Caminos (DGC). If modifications in the legal provisions or the basic regulations concerning MOP or DGC are approved which, in the opinion of the Bank, may substantially affect the project, the Bank may take such measures as it deems appropriate in accordance with provisions to be set forth in the loan contract.
  - (b) The loan shall be used to participate in the execution of a project estimated at the equivalent of US\$43,000,000, and in no case shall the participation from the resources of the loan exceed 74.4% of the total amount of such project. Consequently, the loan contract shall contain such provisions as the Bank deems appropriate to ensure that such national resources as may be necessary, in addition to the loan, for the complete execution of the project shall be duly provided, in a total amount estimated at the equivalent of US\$11,000,000, in accordance with a schedule of investments satisfactory to the Bank.
  - (c) Prior to signature of the loan contract, the borrower shall present to the Bank an authenticated copy of the executive decree promulgated by virtue of which it shall have transferred irrevocably to the Instituto Agrario de Nicaragua (IAN) all the lands included in the area of influence of the project (which extends 15 kilometers in each direction from the center of the road) which have not yet been transferred, in order that IAN, in accordance with the provisions of Agrarian Reform Law No. 797 of 1963 and at the appropriate time, may adjudicate as family farms all the lands without titles.

- (d) Prior to the first disbursement from the financing, the borrower, through MOP, shall present evidence to the Bank of having engaged consulting services for supervision and inspection of the project works, in accordance with procedures to be established in the corresponding annex to the loan contract.
- (e) In the acquisition of machinery, equipment and other materials for the project, and in the awarding of construction contracts, the system of public bids shall be followed in each case in which the value of such acquisitions or contracts exceeds the equivalent of US\$100,000. The bidding shall be subject to procedures to be included in annex to the loan contract.
- (f) The Bank shall establish such inspection procedures as it deems necessary to assure the satisfactory execution of the project, and the borrower and MOP shall extend all cooperation which is required for the most effective accomplishment of this purpose. From the amount of the financing the sum of US\$295,000 and the equivalent of US\$25,000 in cordobas shall be allocated for credit to the general income accounts of the Bank to meet expenses of general inspection and supervision.

RECOMMENDATIONS

It is recommended that the following conditions, to be fulfilled to the Bank's satisfaction, be included in the loan contract in addition to the conditions set forth in the proposed resolution:

1. Prior to each call for bids for construction work, the borrower shall undertake that the executing agency shall present:
  - (i) the plans, specifications and documents required for the construction in question and, if applicable, the documentation pertaining to the call for bids, including the pertinent model contract, and
  - (ii) evidence that the borrower has legal possession of the necessary land.
2. Within one year from the date of completion of the project, and thereafter annually for a period of ten years, the borrower shall present evidence that the works are being adequately maintained in accordance with the stipulations in Section VI of Annex A to the loan contract and with generally accepted technical standards.
3. Within 18 months from the effective date of the loan contract, the borrower, through MOP, shall present to the Bank's satisfaction the following information for evaluating the socioeconomic benefits of the project:
  - (i) the data specified in paragraphs 4.27 and 4.28 of the Project Report, corresponding to the year before the start of construction of the road, and
  - (ii) the system that will be utilized for collecting the data referred to in (i) above and for making the annual comparisons between the data for each year immediately preceding and that corresponding to the year before the start of construction of the road.
4. At the end of the second year from the effective date of the loan contract and of each subsequent year until four (4) years from the date of the last disbursement of the loan, the borrower, through MOP, shall present to the Bank the data specified in paragraphs 4.27 and 4.28 of the Project Report, corresponding in each case to the year immediately preceding.

5. The borrower shall undertake to adopt all measures within its reach so that, in any settlement plans carried out by IAN in the project's area of influence, appropriate provisions will be included with respect to: erosion control, rational exploitation of forests, and environmental protection, including, inter alia, the establishment of forest reserves or the provision of land for forests.
6. Starting from the fiscal year ending on December 31, 1978, and throughout the execution of the project, the financial statements and supplemental information of the project shall be audited by an independent firm of public accountants acceptable to the Bank, in accordance with procedures agreed upon with the Bank. The firm shall be contracted by the borrower after consultation with the Tribunal de Cuentas.
7. An annex substantially similar in content to Appendix III (The Project) to the loan proposal shall be included in the loan contract.

## THE PROJECT

(Annex A to Loan Contract)

### I. Objectives

- 1.01 The Project, which consists of the construction of a road approximately 116 kilometers long between the localities of Rio Blanco and Siuna, has the following objectives:
- (a) Incorporation into the country's economy of new agricultural lands which, because of their climatic and soil conditions and topography, present favorable conditions for development; and
  - (b) Connection of the country's northeastern region, at present lacking means of overland communication with the rest of Nicaragua, with the existing national highway system. It should be noted that this road would complete the first overland transport link in Nicaragua between the two oceans.

### II. Description

- 2.01 The road will be six meters wide, with two-lane bridges and gravel rolling surface. These characteristics are comparable to those of the sections of roads with which the two ends of the proposed highway would connect. Construction will begin simultaneously along two work fronts, one from Rio Blanco to Siuna and the other in the opposite direction, from Siuna to Rio Blanco.

### III. Cost

- 3.01 The cost of the Project is estimated at the equivalent of US\$43,000,000 tentatively distributed as follows by investment categories.

(In US\$ thousands or its equivalent)

	B A N K						NATIONAL RESOURCES				
	FOREIGN EXCHANGE			Subtotal Foreign Exchange	Local Currency Costs	Total Bank	Foreign Exchange Costs	Local Currency Costs	Sub- Total	TOTAL	
	Direct	Indirect	Local Costs								
and Administration	180	220	2,000	2,400	-	2,400	-	100	100	2,500	5
ion	180	220	2,000	2,400	-	2,400	-	-	-	2,400	5
ration	-	-	-	-	-	-	-	100	100	100	0
Construction Costs	3,700	8,100	4,920	16,720	900	17,620	-	6,480	6,480	24,100	56
tion	3,700	8,100	4,920	16,720	900	17,620	-	6,480	6,480	24,100	56
sts	890	-	-	890	50	940	220	-	220	1,160	2
during construction	595	-	-	595	25	620	-	-	-	620	1
ee	-	-	-	-	-	-	220	-	220	220	0
on and supervision	295	-	-	295	25	320	-	-	-	320	0
osts	-	-	-	-	-	-	-	30	30	30	0
f way	-	-	-	-	-	-	-	30	30	30	0
Allocation	2,310	4,980	2,200	9,490	1,550	11,040	-	4,170	4,170	15,210	35
ncies	650	1,340	680	2,670	450	3,120	-	1,250	1,250	4,370	10
alation	1,660	3,640	1,520	6,820	1,100	7,920	-	2,920	2,920	10,840	25
TOTAL	7,080	13,300	9,120	29,500	2,500	32,000	220	10,780	11,000	43,000	100
Percentages	16.5	30.9	21.2	68.6	5.8	74.4	0.5	25.1	25.6	100.0	

#### IV. Financing

4.01 The tentative financing scheme is as follows:

(In US\$ thousands or its equivalent)

	<u>Origin of Resources</u>		<u>Expenditures to be Incurred</u>		<u>Total</u>	<u>%</u>
	<u>Foreign Exchange</u>	<u>Local Currency</u>	<u>Foreign Exchange</u>	<u>Local Currency</u>		
Bank	29,500	2,500	20,380 a/	11,620 b/	32,000	74.4
National resources	-	11,000	220 c/	10,780	11,000	25.6
Totals	<u>29,500</u>	<u>13,500</u>	<u>20,600</u>	<u>22,400</u>	<u>43,000</u>	<u>100.0</u>
Percentages	68.6	31.4	47.9	52.1		

a/ Includes US\$13,300,000 in indirect foreign exchange costs.

b/ The local costs to be financed with foreign exchange from the loan represent 30.9% of the total amount of the loan.

c/ Estimate of credit fee.

#### V. Bidding

5.01 When goods to be acquired or services to be contracted through public bidding are to be financed in whole or in part with foreign exchange from the loan, the bidding procedures and specific bidding requirements shall permit unrestricted participation of goods or contractors, respectively, from member countries of the Bank. Consequently, no conditions precluding or restricting the participation of contractors or the offer of goods from such countries shall be established in such procedures or specific requirements.

#### VI. Maintenance of the Road

6.01 The basic purpose of the maintenance shall be to keep the road or section of road and related facilities financed with the loan in substantially the same condition as they were in at the time of completion of each of them.

6.02 The annual maintenance plan for the road shall be presented for the Bank's consideration prior to the November 30 preceding each fiscal year. The plan shall include, as a minimum, detailed information on the organization responsible for maintenance; the personnel in charge of the maintenance; the number, type and condition of the equipment to be used for maintenance; the location,

size and condition of repair and storage facilities and maintenance equipment; the control measures to be taken to limit the size and weight of vehicles using the road; and the number of kilometers and location of the section to be maintained.

- 6.03 The maintenance plan shall state the amount of funds available in the current maintenance budget as of November 30 of each year (excluding funds for improvement operations) and the amount to be assigned in the budget for the year for which the plan is submitted. The plan shall also specify separately the maintenance activities planned to be carried out on the road, quantifying the costs.
- 6.04 The plan shall also include a report on the maintenance conditions based on a system of adequacy evaluation. The system shall be so structured as to provide an overall rating of maintenance conditions of the road, such rating to be based on a numerical evaluation of the various components, such as pavement, shoulders, culverts, drainage structure, and signals.
- 6.05 The Bank will reserve the right to inspect the road periodically. Should it be determined on the basis of such inspections or of reports received by the Bank that the maintenance is below the agreed-upon levels, the borrower and MOP shall take the necessary steps to correct all deficiencies.