

**PAN-AMERICAN HIGHWAY REHABILITATION PROGRAM**

(NI-0099)

**EXECUTIVE SUMMARY**

**BORROWER AND GUARANTOR:** Republic of Nicaragua

**EXECUTING AGENCY:** Ministry of Transportation and Infrastructure (MTI)  
Road Maintenance Fund (FOMAV)

**AMOUNT AND SOURCE:**

IDB:	US\$50,000,000 (FSO)
Cofinancing:	US\$18,000,000
Local contribution:	<u>US\$13,600,000</u>
Total:	US\$81,600,000

**FINANCIAL TERMS AND CONDITIONS:**

Amortization period:	40 years
Disbursement period:	4 years
Interest rate:	1% for the first 10 years, 2% for the next 30 years
Inspection and supervision:	1%
Credit fee:	0.5%

**OBJECTIVES:** This program has the following objectives: (i) to support rehabilitation of the Pan-American Highway (PH), which is the primary road corridor supporting Nicaragua's economic base and facilitating regional integration; and (ii) to support implementation of a sustainable road maintenance mechanism, to allow a reduction in the destructive effects of natural phenomena on the road network.

**DESCRIPTION:** The PH and natural corridor (NC) between Managua - León - Chinandega - Guasaule is the primary arterial road network in Nicaragua. Although the PH suffered no significant damage, because of its excellent original construction and location in stable areas, its service life had reached the point where rehabilitation was a priority. The NC, in particular, was seriously affected by Hurricane Mitch and will take another five years to be completely rehabilitated. Consequently, the first program component (US\$75.3 million) would support the rehabilitation of six sections of the PH between El Espino and Nandaime (259 kilometers), affording the country a completely rehabilitated road between the Costa Rican and Honduran borders.

The program's second component would support establishment of the Road Maintenance Fund (FOMAV), using seed capital to finance road network maintenance activities. Financing will be provided for consulting services, resources and training for implementation of the FOMAV and strengthening of the MTI as an oversight and regulatory agency for the sector. As part of the support for the MTI, a consulting firm would be engaged to advise the Program Coordinating Unit (PCU) on program management and monitoring and coordination with the National Road Reconstruction Program.

**ENVIRONMENTAL  
AND SOCIAL  
REVIEW:**

Because of the excellent original construction of the PH and its location in stable areas, the rehabilitation works under the program will not require road redesign, nor do they entail major construction difficulties or population resettlement. However, in order to minimize any possibility of environmental damage, during the rehabilitation phase and over the useful life of the highway, general criteria have been established within the program, involving principles of sustainability and environmental quality control procedures. The environmental impact will be monitored by the MTI Environmental Unit (EU), which will be supported by an environmental specialist, the terms of reference for which have been agreed to with the Bank; the supervisory firms will be required to have an environmental specialist and it is proposed that an independent environmental evaluation of the Program be carried out upon its completion, with a view to providing recommendations that could be applied to future activities.

**BENEFITS:**

Lower transportation costs. In addition, this program will contribute to economic recovery, increased agricultural production, and higher standards of living for the Nicaraguan people, facilitating rehabilitation of the road infrastructure necessary for adequate and permanent access to markets and to basic social services and economic infrastructure. The projects comprising this operation were selected in consideration of the rehabilitation priorities defined subsequent to Hurricane Mitch, and will allow the country to recover the road corridor supporting its economic base and facilitating regional integration.

**RISKS:**

The program faces risks primarily with respect to the continuity and level of road system maintenance, and the poor quality of the existing infrastructure for financing, planning and managing road upkeep. The

lack of adequate and timely road maintenance is one of the most important reasons why natural disasters have a highly destructive impact on the road network and the economy in general. In order to mitigate this risk, the government has resolved to intensify its efforts for the approval and operation of the Road Maintenance Fund (FOMAV), for which REMEVIAL financed a study and the drafting of the bill. Implementation will place new technical and administrative demands and coordination requirements on the MTI's various offices facilities, and will require more effective coordination among them. Accordingly, the proposed Bank financing includes funding for implementation of the FOMAV and for strengthening the MTI.

**EXCEPTIONS TO  
BANK POLICY:**

None.

**CRITERIA FOR  
POVERTY AND SOCIAL  
EQUITY POLICIES:**

This operation qualifies as a poverty- and social equity-targeted project, as described among the key objectives for Bank activities set forth in the report on the Eighth Replenishment. This Project qualifies as a poverty-targeted initiative in accordance with the geographic criteria, since approximately 75% of the population to be affected falls below the poverty level (paragraph 4.8).

**THE BANK'S  
COUNTRY AND  
SECTOR STRATEGY:**

This operation is designed to support reconstruction of the road network, thereby providing for the flexible and effective restoration of macro-economic flows through intra-regional trade. Through this US\$81.6 million operation, the Bank is supplementing the support it already granted during the emergency when it authorized the reallocation of up to US\$5 million in funds for the REMEVIAL loan, 957/SF-NI.

The Bank is also supporting the government in preparation of the Road Reconstruction and Transformation Program, which will coordinate support from the international community in making the necessary investments. This program will be presented to the regional consultative group at its meeting in Stockholm in mid-1999. An initial estimate indicates that the requirements of the road network will be on the order of US\$730 million, including some US\$447 million for the 1999-2002 period. In addition, the Bank has arranged to contribute to supporting the Road Reconstruction Program (NI-0113) with a new operation totaling US\$90 million.

**SPECIAL  
CONTRACTUAL  
CONDITIONS:**

A. Conditions precedent to the first disbursement

The firm that will be advising the PCU must have been hired and an environmental specialist must have been brought in to the EU (paragraphs 2.6, 3.2 and 3.23).

B. Other special contractual conditions

a. Before the works contracts are awarded, the executing agency must provide evidence that consulting services have been hired to supervise the works (paragraph 2.4).

b. Before disbursements can be made for the execution of road maintenance activities, evidence must have been provided that FOMAV has been set up and placed in operation (paragraph 2.7).

Agreement must also be reached on the appropriate technical and environmental conditions for this type of operation, as well as on the conditions for auditing, reporting, follow-up and maintenance.

**PROCUREMENT:**

International public bidding will be conducted for the procurement of goods in amounts of US\$300,000 or more and works in amounts of US\$3 million or more. Bidding will be conducted for the procurement of consulting services in amounts of US\$200,000 or more. Procurements beneath these thresholds will be subject to the procedure indicated in paragraph 3.4 of this document.

## I. FRAME OF REFERENCE

### A. Introduction

- 1.1 This program seeks to consolidate the process begun with operations currently underway to improve Nicaragua's road infrastructure, through rehabilitation of its primary road corridor, institutional strengthening of the sub-sector and implementation of a mechanism to ensure sustainable road maintenance. Preparation of this operation began prior to Hurricane Mitch as a general highway rehabilitation program. During the high-level mission carried out in November 1998 to review the country's priorities as a consequence of Hurricane Mitch, the government requested that the Bank process this operation on an urgent basis in order to rehabilitate the Pan-American Highway.

### B. Hurricane Mitch and its impact on Nicaragua

- 1.2 Beginning on October 20, 1998, Hurricane Mitch affected the Central American region almost continuously for a 10-day period, with rain of an intensity and duration unprecedented in the historical records. The storm was so intense that some places received the equivalent of their entire average annual rainfall during this period alone. Landslides and flooding from rivers and Lake Managua caused damage throughout the country, with particularly severe effects on the transportation, water, agricultural and livestock, health, housing and education sectors.

#### 1. Social and Economic Impact

- 1.3 Deaths, illness, and housing losses were particularly prevalent among the poor. The most dramatic loss of life occurred with the collapse of the Casitas volcano, in the municipality of Posoltega, Chinandega Department, burying entire rural communities in extremely impoverished areas. Seven departments in the western and northern regions were the most severely affected. Preliminary official data from the survey carried out by the United Nation Development Program (UNDP) indicate that more than 850,000 people, equivalent to 19% of the country's population, were affected, with 2,863 dead, 948 missing, 388 injured, 370,000 evacuated and 65,000 in refugee centers.
- 1.4 The most significant damage affecting the economy was concentrated on infrastructure, particularly the road network, agricultural production and the interruption of intra-regional trade. The UNDP estimated that direct and indirect damage caused by the hurricane to the Nicaraguan economy totaled approximately US\$900 million, of which damage to the road and the rail transportation infrastructure represented US\$306 million.

2. Impact on the road network

1.5 As a result of Hurricane Mitch, the road sector suffered severe damage to approximately 2,400 kilometers of highway and access roads in the production areas, particularly in the natural corridor and in sections of the Pan-American Highway, with 23 bridges destroyed and 59 severely damaged. Damage to the network of highways, roads and bridges left large cities, such as León, Chinandega, Sébaco, Matagalpa, Jinoteca, Boaco, Jigalpa and Estelí, among others, isolated from the capital. Table I-1 provides a summary of the road infrastructure affected.

<b>TABLE I-1 ROAD INFRASTRUCTURE DAMAGED BY HURRICANE MITCH</b>						
<b>REGION</b>		<b>HIGHWAYS (Km)</b>		<b>BRIDGES (UNITS)</b>		
<b>DEPARTMENT</b>		<b>UNPAVED</b>	<b>PAVED</b>	<b>DESTROYED</b>	<b>DAMAGED</b>	<b>COVERED BY WATER</b>
<b>REGION I</b>		<b>103</b>	<b>205</b>	<b>5</b>	<b>3</b>	<b>4</b>
01	New Segovia	24	124	1	3	1
02	Madriz	38	15	1		2
03	Estelí	41	66	3		1
<b>REGIÓN II</b>		<b>191</b>	<b>263</b>	<b>6</b>	<b>13</b>	<b>11</b>
01	León	73	125	4	12	4
02	Chinandega	118	138	2	1	7
<b>REGION III</b>		<b>108</b>	<b>185</b>	<b>2</b>	<b>1</b>	<b>1</b>
01	Managua	108	185	2	1	1
<b>REGION IV</b>		<b>243</b>	<b>202</b>		<b>3</b>	<b>2</b>
01	Carazo	18	34		1	
02	Rivas	180	18			2
03	Granada	45	80		2	
04	Masaya		70			
<b>REGION V</b>		<b>177</b>	<b>190</b>		<b>4</b>	<b>1</b>
01	Chontales	127	104			
02	Boaco	51	86		4	1
<b>REGION VI</b>		<b>266</b>	<b>80</b>	<b>9</b>	<b>14</b>	
01	Matagalpa	195	64	9	11	
02	Jinotega	70	16		3	
<b>RAAN</b>		<b>255</b>		<b>1</b>	<b>2</b>	
<b>RAAS</b>		<b>20</b>				
<b>Grand total</b>		<b>1,363</b>	<b>1,125</b>	<b>23</b>	<b>40</b>	<b>19</b>

C. The road reconstruction and transformation program

1.6 The Ministry of Transportation and Infrastructure (MTI) is now working actively to develop the Nicaraguan Reconstruction and Transformation Program, which would entail road sector investments

in excess of US\$730 million. Table I-2 provides a summary of costs broken down by road corridor. This operation will provide support for part of the investments required along the northern and southern Pan American corridors. The new operation programmed by the Bank will provide US\$90 million in support for the Highway Reconstruction Program (NI-0113), to cover investments along the South Atlantic, Natural, and Northern Pan American corridors.

- 1.7 The Pan-American Highway (PH) and its sections between Managua-San Benito-El Espino to the north and Managua-Nandaime-Peñas Blancas to the south, along with the so-called natural corridor (NC) between Managua-León-Chinandega-Guasaule, constitute the main arteries of the Nicaraguan road network. The NC, like many production roads, suffered severe damage from Hurricane Mitch, aggravating the already poor condition of those roads. Although the PH suffered no significant damage from Hurricane Mitch, it is nearing the end of its useful life because of the age of the pavement and the lack of timely maintenance. The country urgently needs to rehabilitate the two main arteries, so rehabilitation of the PH has become a high priority, given that the work can be executed in a relatively short time due to the solid original construction and location in stable areas, whereas the NC was seriously affected and will take another five years to be completely rehabilitated.

Requirements	Emergency	Reconstruction Program	
	(Nov-Dec/98)	Total Works	Execution 1999-2002
Natural corridor	9.9	186.5	94.4
North Pan-American	7.1	203.5	182.0
South Pan-American	0.0	68.1	21.1
San Isidro-Telica	1.8	34.0	6.8
North Atlantic	3.3	65.1	38.0
South Atlantic	0.0	127.4	59.8
Other	0.0	45.8	45.8
<b>TOTAL</b>	<b>22.1</b>	<b>730.4</b>	<b>447.9</b>

\* Does not include direct work executed by the US, Spain and other donors.

1. Immediate emergency attention stage

- 1.8 This emergency phase, between November and December 1998, was intended to restore traffic to the primary and feeder network. The approximate cost of this phase was US\$22.1 million. In carrying out this phase, the MTI acted extremely quickly to mobilize and begin immediate implementation of the program in over 100 locations

throughout the northwestern region. Secondary roads suffered as much or more damage as the main highways, for which reason the emergency plan includes repairs to the primary roads servicing coffee and basic grain producers, as well as the social sectors. This work was executed by the MTI, the Rural Development Institute (IDR) and the Emergency Social Investment Fund (FISE).

## 2. Road reconstruction program

1.9 The Nicaraguan Road Network Reconstruction Program, budgeted at approximately US\$730.4 million, covers two periods. The first (1999-2002) will include the execution of priority rehabilitation and reconstruction works intended to permanently restore traffic to the primary road corridors and some feeder roads. Financing for some of these works must still be defined or confirmed by international donors, and technical, economic, financial and environmental documents, as well as the bidding documents, must be prepared. In general execution will begin in 1999 or 2000. At this stage, initial estimates indicate funding needs of approximately US\$447.9 million.

1.10 The second phase will include activities involving reconstruction and rehabilitation of the national infrastructure, which would begin in late year 2002 with needs estimated at US\$282.5 million. The components of this stage must still be defined more accurately, and environmental and engineering studies must be prepared, based on a long-term strategy and experience gained in this emergency. Solutions must be complete and incorporate precautionary measures with respect to the technical, environmental, human settlement and political aspects of land use.

1.11 With Bank support, MTI is now reviewing this road emergency and reconstruction plan. In preparing the program, the execution capacity limitations of MTI and the contracting companies, as well as the limited fiscal resources available and commitments under the IMF adjustment program, are being taken into consideration.

### D. Strategy and coordination of the government, the Bank and the international community

1.12 At the government's request, the Bank and the international community are coordinating their response to the needs created by Hurricane Mitch in the various stages mentioned above.

1.13 During the **immediate attention stage**, the IDB contributed to the repair of road damage caused by Hurricane Mitch, authorizing MTI, for certain emergency works, to hire private companies that had been engaged in the Road Rehabilitation and Improvement Program (REMEVIAL), and for other newly identified works, to hire companies belonging to the Regional Construction Companies Corporation (COERCO). The US\$5 million required for these works will be

financed through REMEVIAl loan 957/SF-NI. The World Bank (WB), the Governments of Sweden, Denmark, Mexico and Chile, as well as other donors, have also agreed to finance emergency works.

- 1.14 In order to address the **priority works** of the road reconstruction program, and in response to the government's request, the Bank would concentrate its support efforts on restoring the Pan-American Highway road corridor. That is the purpose of this operation, with its budget of US\$81.6 million. Support from the Bank and other donors would go towards rehabilitation of a large part of the road system. The other donors in this stage include the World Bank, which is supporting the partial rehabilitation of roads in the Yalaguina-Las Manos sector - as a complement to the PH's connection to Honduras - as well as DANIDA, the FIV, the Government of Italy, and the European Union, which are supporting the rehabilitation of feeder highways. In addition, the Governments of Japan and Chile will supply some of the bridges required for the main highways; the United States, Spain and other donors will provide equipment and labor to rehabilitate production roads.
- 1.15 The government will present the emergency and road reconstruction program to the Regional Consultative Group, which will be meeting in Stockholm in mid-1999. The program will provide for the coordination of all support measures by the international community for the required investments. An initial estimate indicates that the road network's requirements will be on the order of US\$730 million, of which an estimated US\$447 million would be needed during the 1999-2002 period.

E. The road sector and programs being executed by the Bank

- 1.16 The road sector has been recently reorganized as part of the public administration reform program, with a restructuring of its functions and of the basic sectoral structure. A major reform that entered into force in September 1998 transformed the Ministry of Construction and Transportation (MCT) into the MTI, converting it into a planning, regulatory and standardization agency for the transportation and infrastructure sectors. As part of this reform, greater importance has been assigned to the sector's environmental aspects, strengthening the Environmental Unit (EU) and raising it in the hierarchy. The new program will provide support for the consolidation of this modernization process.
- 1.17 In addition to aspects relating to the road network, the MTI budget includes allocations for the inter-urban network and smaller sums for airports and ports. The urban network is the responsibility of municipal agencies. Production roads are maintained with private funding (coffee producers) and more recently funding from the FISE, but the amounts are small in both cases.

- 1.18 Table I-3 shows historic and projected expense growth for the road network under the MTI's responsibility. Funding allocated over the past four years to the road sector through the MTI budget remained constant at an annual average of approximately US\$56.5 million, some 60% of which is from outside sources, among which the Bank has contributed over 50%. The rest came from the World Bank, DANIDA, Japan and the Venezuela Investment Fund (FIV).
- 1.19 With support from the Bank, the MTI has been executing the Rural Roads Rehabilitation and Improvement Program (REMECAR) (loans 756/OC-NI and 902/SF-NI for US\$46 million), and the REMEVIAL Program (loan 957/SF-NI for US\$75 million). REMECAR was completed in 1998 and REMEVIAL is making satisfactory progress, with 60% of the funds disbursed and 90% committed.

<b>TABLE I-3</b>						
<b>ROAD SECTOR EXPENSES AND FINANCING</b>						
<b>(In millions of US\$)</b>						
	<b>Total</b>	<b>1999-2002 period</b>				
	<b>95-98</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>Total</b>
Rehabilitation and Improvement	135.4	83.8	112.3	122.4	129.3	447.8
Maintenance	54.5	7.8	19.1	18.3	18.2	63.4
Expenses, studies, etc.	35.9	14.3	14.7	13.5	10.2	52.7
<b>TOTAL EXPENSES</b>	<b>225.8</b>	<b>105.9</b>	<b>146.1</b>	<b>154.2</b>	<b>157.7</b>	<b>563.9</b>
IDB	83.2	23.0	36.5	39.8	31.8	131.1
WORLD BANK	8.9	24.0	33.7	37.9	29.2	124.8
OTHER DONORS	44.4	28.9	38.4	36.9	55.0	159.2
Sub-Total external	136.5	75.9	108.6	114.6	116.0	415.1
National budget	89.3	30.0	27.5	29.6	31.7	118.8
Road Maintenance Fund	0.0	0.0	10.0	10.0	10.0	30.0
<b>TOTAL SOURCES</b>	<b>225.8</b>	<b>105.9</b>	<b>146.1</b>	<b>154.2</b>	<b>157.7</b>	<b>563.9</b>
<b>Annual Average</b>	<b>56.5</b>					<b>141.0</b>

- 1.20 Despite the progress achieved through current operations, the executing agency still lacks the operational capacity and resources needed to ensure sustainable maintenance of the "maintainable" road network (approximately 10,000 kilometers of the 17,000 kilometer total road network). Seventy percent of the maintainable network is in poor condition, and the situation has worsened with the emergency. The rest of the network consists of dry season roads that usually receive no maintenance. The inventory of projects requiring rehabilitation and improvement, along with annual maintenance needs, far exceeds the capacity of existing fiscal funding. To meet these needs, the government has decided to intensify its efforts to approve and operate the Road Maintenance Fund (FOMAV). REMEVIAL has financed a study and the drafting of legislation on FOMAV.

- 1.21 FOMAV will be a highly autonomous entity with its own legal status and assets. Its objective will be to ensure maintenance of the maintainable road network by engaging private maintenance services through public bidding. FOMAV will have a Board of Directors, on which road users and the State will be represented in equal numbers. Private sector representatives will be selected by the President of Nicaragua from candidate lists proposed by the user associations and the transport companies. FOMAV will be staffed with qualified personnel, and its budget for administrative expenses may not exceed 4% of total income.
- 1.22 FOMAV will have its own funding, allocated by law to be drawn from road service charges to consumers of gasoline and diesel fuel. FOMAV's resources will allow for attainment of the physical goals of the four-year maintenance plan, which will initially include routine and periodic maintenance of 100% of the maintainable road system, composed of 80% paved roads and 60% unpaved. This plan will be initially developed by the MTI, and then brought up to date by FOMAV.
- 1.23 The projections in Table I-3 imply that average annual road network expenses will increase from US\$56.5 million during the 1995-1998 period, to US\$141 million during the 1999-2002 period. This two-fold increase will require a significantly greater execution capacity and financing, to be provided through the institutional strengthening programs of this operation and the contributions of equipment and specialized personnel from other donors. The contributions from the government's budget take into account the conditions imposed by the impact of Hurricane Mitch on the country's economy, so that the increase in needs will be essentially covered by external donor financing resources. However, once external debt relief has been formalized through the Heavily Indebted Poor Countries (HIPC) initiative, the government may be able to contribute more to the road sector.
- 1.24 Finally, it is important to note that in 1995 the Nicaraguan Assembly approved the Public Works Concessions Act, making it possible to administer highways under private concession. The government, with support from the Bank's Private Sector Department, is studying the possibility of awarding some sections of highways to the private sector, where justified by the volume of traffic.

F. The Bank's Country and Sector Strategy.

- 1.25 This operation is designed to support reconstruction of the road network, thereby providing for the flexible and effective restoration of macro-economic flows for intra-regional trade. Through this US\$81.6 million operation, the Bank would support rehabilitation of the PH, supplementing the support already provided during the emergency by authorizing the reallocation of up to US\$5 million in funds from REMEVIAL (loan 957/SF-NI).

1.26 One of the lessons learned from the Bank's experience in transportation sector projects is that the lack of a maintenance policy and a financial mechanism have affected the sustainability of highway projects. The experience with Hurricane Mitch confirmed that the destructive impact on the road network was the largely the result of inadequate maintenance - particularly the cleaning of drains and stabilization of slopes. Accordingly, the proposed operation will provide support for the implementation of FOMAV through technical assistance and seed capital, which will help to lay the groundwork for proper maintenance of the highway system. In monitoring the current operation, and as part of the sector policy dialog with national authorities, the Bank will follow the FOMAV implementation process very closely to determine what additional support may be necessary, possibly for inclusion in the NI-0113 operation now being prepared.

## II. THE PROGRAM

### A. Objectives

- 2.1 The program has the following objectives: (i) to support rehabilitation of the Pan-American Highway (PH), which is the primary road corridor supporting Nicaragua's economic base and facilitating regional integration; and (ii) to support implementation of a sustainable road maintenance mechanism, to allow a reduction in the destructive effects of natural phenomena on the road network.
- 2.2 A logical framework has been prepared as tool for evaluating and monitoring program execution. It provides indicators for each of the program's main objectives and activities, means of verifying them, and the assumptions or specific goals expected to be achieved from implementing the program, as presented in Annex II-1.

### B. Program Components

- 2.3 The program consists of two components. The first component of the proposed activity would allow the country to recover six sections of the Pan-American Highway. The second component would support establishment of the Road Maintenance Fund (FOMAV) and would support it with seed capital to finance road network maintenance activities. This support includes the financing of consulting services, funding and training for implementation of the FOMAV, as well as strengthening of the MTI as an oversight and regulatory agency for the sector.

#### 1. Rehabilitation of the Pan-American Highway

- 2.4 This component would finance the rehabilitation of six sections of the Northern Pan-American Highway, totaling 259 kilometers. The sections to be rehabilitated are the following: San Benito-Sébaco (69 kms); Sébaco-Estelí (43 kms); Estelí-Yalaguina (61 kms); Yalaguina-El Espino (31 kms); Tipitapa-Las Flores (28 kms); and the Las Flores-Nandaime section (27 kms). Two bridges on the Estelí to El Espino section would be rebuilt. Before the program works contracts are awarded, the executing agency must provide evidence that consulting services have been hired to supervise the works.
- 2.5 The highway's geometric characteristics and stability are very good, so the rehabilitation works can be started without affecting its structure. The final engineering for the required paving and drainage structure is being prepared, including horizontal and vertical signaling, as well as road safety aspects. The bidding documents will be available during the first quarter of 1999, and execution of the works should begin around the middle of the same year.

## 2. Support for FOMAV and Strengthening of the MTI

- 2.6 This component would finance consulting services for the following: (i) support for the implementation of FOMAV as a sustainable financing mechanism for upkeep of the road network; and (ii) strengthening of the MTI as an oversight and regulatory agency for the sector, including a consultancy to advise FOMAV in managing and monitoring the program. For the purposes of monitoring the environmental impact of this program, the MTI/EU will be strengthened with environmental specialists, whose terms of reference have been agreed to with the Bank. The support for implementation of FOMAV would include the engagement of advisory firms, the purchase of equipment and materials required to begin operations, the preparation of operational and functional manuals, and training programs. Strengthening of the MTI includes advisory services and equipment for the MTI's EU, the General Planning Office (DGP), and the General Roads Office (DGV).
- 2.7 To enable FOMAV to begin operations as quickly as possible after its creation, the program would help finance the maintenance of 1,500 kilometers of main highways by private companies, with seed capital funding totaling US\$2 million. These funds would supplement World Bank seed capital for the hire of microenterprises and community organizations, and would be used to engage companies through public bidding to maintain sections of the principal highways. Before authorizing disbursements for the execution of road maintenance activities, evidence must be provided that FOMAV has been created and is operating.

### C. Program Costs

- 2.8 The project's total cost has been estimated at the equivalent of US\$81.6 million. This includes engineering and administration, direct costs - including those relating to environmental management - associated concurrent costs, contingencies, scaling and financing expenses. The total costs and financing are presented in Table II-1. Additional detail on costs is available in the program's technical files.

### D. Program Financing

- 2.9 Program costs would be financed with Bank funding, cofinancing resources and the Borrower's own resources.

#### 1. The Bank's Share

- 2.10 The Bank's share will be paid in installments from the Fund for Special Operations (FSO) in a total amount equivalent to US\$50 million, or 61.3% of total program cost.

<b>TABLE II-1</b>					
<b>ESTIMATED COSTS AND FINANCING PLAN</b>					
<b>(equivalent in US\$ millions)</b>					
CATEGORIES	IDB	LOCAL CONTRIBUTION		TOTAL	%
		COFIN	GNI		
<b>1. ENGINEERING AND ADMINISTRATION</b>	<b>4.4</b>	<b>1.5</b>	<b>1.2</b>	<b>7.1</b>	<b>8.7</b>
1.1 PCU Advisory, Engineering and Studies	1.0	0.0	0.2	1.2	1.5
1.2 Works supervision and audits	2.9	1.5	0.9	5.3	6.5
1.4 Support for PCU management	0.5	0.0	0.1	0.6	0.7
<b>2. DIRECT COSTS</b>	<b>41.4</b>	<b>15.4</b>	<b>11.2</b>	<b>68.0</b>	<b>83.3</b>
2.1 Pan-American North Rehabilitation	39.4	0.0	7.8	47.2	57.8
2.2 Pan-American South Rehabilitation	0.0	12.4	2.5	14.9	18.3
2.3 Bridge Rehabilitation	0.0	3.0	0.6	3.6	4.4
2.4 Support for road maintenance	2.0	0.0	0.3	2.3	2.8
<b>3. ASSOCIATED CONCURRENT COSTS</b>	<b>1.5</b>	<b>0.0</b>	<b>0.3</b>	<b>1.8</b>	<b>2.2</b>
3.1 Institutional Strengthening (MTI)	0.5	0.0	0.1	0.6	0.7
3.2 Funding of equipment (PCU, MTI, FOMAV)	0.5	0.0	0.1	0.6	0.7
3.3 Support for the road maintenance fund	0.5	0.0	0.1	0.6	0.7
<b>4. No specific allocation</b>	<b>1.1</b>	<b>0.6</b>	<b>0.3</b>	<b>2.0</b>	<b>2.5</b>
4.1 Contingencies	1.1	0.6	0.3	2.0	2.0
<b>5. FINANCING EXPENSES</b>	<b>1.6</b>	<b>0.5</b>	<b>0.6</b>	<b>2.7</b>	<b>3.3</b>
5.1 Interest	1.1	0.3	0.0	1.4	1.7
5.2 Fees	0.0	0.0	0.6	0.6	0.7
5.3 Inspection and monitoring	0.5	0.2	0.0	0.7	0.9
<b>GRAND TOTAL</b>	<b>50.0</b>	<b>18.0</b>	<b>13.6</b>	<b>81.6</b>	<b>100.0</b>
<b>PERCENTAGES</b>	<b>61.3</b>	<b>22.1</b>	<b>16.7</b>	<b>100.0</b>	

## 2. Cofinancing

- 2.11 Cofinancing parties are currently in the process of being identified for the rehabilitation works on the two sections of the southern sector of the PH and for construction of the bridges in the northern sector. The Central American Bank for Economic Integration (BCIE) has expressed interest in financing the bridges, and the Bank is also discussing the matter with the ICDF of Taipei, with a view to obtaining soft cofinancing for rehabilitation of the southern section. The amount to be financed is US\$18 million, which is equivalent to 22.1% of the program's total cost. Nevertheless, because of the importance of this corridor, the authorities have requested that if the cofinancing is not forthcoming by year-end 1999, these works be included in the US\$90 million support operation for the Road Reconstruction Program (NI-0113), which the Bank is preparing for consideration in the year 2000. In that event, adjustments would be made to the borrower's contractual obligations as necessary.

3. National contribution

- 2.12 The national contribution will be the equivalent of US\$13.6 million, i.e., 16.7% of the total program cost. This will basically cover payment of the IGV and financial expenses not covered by the loans.

### III. PROGRAM EXECUTION

#### A. The borrower and the executor

- 3.1 The Borrower will be the Republic of Nicaragua. The executing agency for the program will be the MTI, through the PCU, with the exception of the component specified in number 2.7, which will be executed by FOMAV.

#### B. Program management

- 3.2 The program will be managed by the PCU, which will benefit from the organizational structure that has been formed and that made it possible to execute the REMECAR and REMEVIAL programs. For purposes of executing the program, the PCU will receive support from an advisory firm and timely advice on specific issues, to solve problems arising during the course of the activities in areas where it does not have its own specialized expertise. The terms of reference for these services have been agreed to with the Bank and are available in the project's technical files.
- 3.3 The PCU will conduct the bidding and contracting processes for the works, goods, and advisory services, with the exception of maintenance contracts to be handled by FOMAV once duly established. The PCU receives support from the MTI's EU with respect to environmental aspects; from the DGP with respect to road network planning; and from the DGV and FOMAV in monitoring road maintenance.

#### C. Procurement of goods, works, and services

- 3.4 Works, consulting services, and equipment financed with Bank funds must be procured through a competitive bidding process in accordance with Bank standards and procedures: (i) international public bidding (IPB) for civil works contracts in amounts of US\$3 million or more; national public bidding (NPB) for amounts between US\$300,000 to US\$2,999,999; and on the basis of three (3) quotes submitted by qualified contracting companies for amounts of US\$300,000 or less. The works contracts will be awarded to the firm submitting the cost proposal evaluated as being the lowest, provided that it is technically acceptable; (ii) consulting services valued at over US\$200,000 will be awarded through an IPB, while those valued at up to US\$200,000 will be awarded through an NPB; (iii) equipment will be procured through IPB for values in excess of US\$299,999; through an NPB for values between US\$100,000 and US\$299,999; and on the basis of three (3) quotes submitted by suppliers amounts of US\$100,000 or less. Annex III-1 presents the Bidding and Procurement Plan.

3.5 Given the urgency of rehabilitating the PH, the government, after consulting with the Project Team, requested publication of the general procurement notice (GPN) in "Development Business" for items to be procured through international public bidding based on the amounts specified in the above paragraph. Since the works to be executed are not highly complex and the executor has recently pre-qualified a number of companies through an international call for bids based on the general specifications of the REMEVIAl program, the pre-qualification results will be used for purposes of international bids. Similarly, the GPN will indicate that interested companies not currently pre-qualified by the MTI may become so prior to the first call for bids. It will also be stated in the GPN that the pre-qualification criteria and the methodology for evaluating companies responding to this notice will be identical to those used in the previous pre-qualification. Companies already pre-qualified by the MTI will be asked to update their background information to ensure that they still conform to the specifications necessary for execution of the program.

D. Execution period, and investment and disbursement schedule

3.6 The program execution period will be three years as of the date of the entry into force of the loan agreement, which includes the time needed to fulfill the conditions precedent to the first disbursement, as well as deadlines for bidding on the works, contracting and executing them, supervision and other advisory services. Table III-1 shows the estimated disbursement schedule.

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>TOTAL</b>	<b>%</b>
IDB	9.8	18.2	16.6	5.4	50.0	61.7
COFINANCING	0.0	6.1	7.0	4.9	18.0	22.2
MTI	2.3	4.8	4.6	1.9	13.6	16.8
TOTAL	12.1	29.1	28.2	12.2	81.6	100.0
%	14.8	35.7	34.6	15.0	100.0	

E. Program follow-up

1. Execution plan, progress reports and final report

3.7 The PCU will submit to the Bank an initial report containing a detailed action plan for the activities to be carried out, including a schedule, required resources, assigned responsibilities and goals to be achieved. This report will be submitted as part of the initial report provided for in the general regulations for the Bank's contracts.

- 3.8 In addition, semi-annual progress reports will be submitted with appropriate detail on the evaluation and fulfillment of the action plan specified in the preceding paragraph. These reports will indicate, among other matters, the works and equipment financed, the beneficiaries served and the procedures applied in using the financing resources and the number of projects approved during the semi-annual period. The progress report corresponding to the final semi-annual execution period will constitute the final program report.

## 2. Supervision and semi-annual meetings

- 3.9 The Bank will supervise execution of the various program components, including aspects of road maintenance during execution of the program and for five years after the final disbursement, through the Bank's country office in Nicaragua.
- 3.10 Within one month after submitting each semi-annual report, a program follow-up meeting will be held to assess the bidding process, environmental aspects of the projects, disbursements, problems arising during execution and means to solve them, adherence to the logical framework and other relevant aspects of project execution. These meetings will also be used to agree on the details of the action plan for the following semi-annual period.

## 3. Annual road maintenance report

- 3.11 The MTI, through the PCU, along with the FOMAV, will submit to the Bank an annual road network maintenance report, which will include the environmental and social components under the terms agreed to with the Bank. The report for each year during the program execution period will be submitted within the first quarter of the following year, and for five (5) years after the date of the final disbursement, with the objective of ensuring permanent, thorough evaluation of the maintenance activities. Reports will contain the following, at a minimum: (i) information on the general structure and responsibilities of the entity or entities assigned to perform road maintenance, the number and type of personnel assigned, available equipment and the nature and number of road maintenance contracts awarded; (ii) an updated inventory of the condition of the network; (iii) an evaluation of maintenance plan execution the preceding year; and (iv) a road maintenance plan for the following fiscal year, justifying the priorities adopted, the type of activities, the execution schedule and financial and physical resources.

## 4. Outside auditing

- 3.12 An outside auditor will be engaged annually to evaluate use of the funds and to verify that the executing agency adopts and conforms to the financial management practices agreed to with the Bank.

Financial statements will be submitted by the executing agency within 120 days after the close of each fiscal year, beginning with the fiscal year when project execution is initiated, and during program execution. This audit will be carried out using loan funding.

5. Subsequent evaluation

- 3.13 In accordance with Bank policy, and in consultation with the executing agency, it was decided not to include an ex-post evaluation as part of the project activities.

F. Operations and maintenance

- 3.14 The executing agency for the works and services financed using Bank funding must commit to operating and maintaining such works and equipment in accordance with generally accepted technical standards. To this end, the borrower must submit, as part of its annual road maintenance report, a report on the maintenance status of such works and equipment, based on the results of the supervisory activities carried out on a representative sample of the projects financed using program funding.
- 3.15 During execution of the program, the borrower will allow the Bank to visit and inspect the financed projects, and in the event that it is demonstrated that maintenance levels are not acceptable, the borrower and the relevant entity will be required to take the necessary measures to correct the situation.

G. Environmental and social aspects

- 3.16 Given the excellent original construction of the road and its location in stable areas, the rehabilitation works to be carried out under the program do not present significant construction difficulties, do not entail population resettlement and do not involve any rerouting. The slopes are adequate, but there have been slides in a few localized segments (totalling approximately 4 kilometers), specifically as a consequence of saturation from Hurricane Mitch and aggravated by scarce and sporadic maintenance and inadequate sub-drainage. For these segments, the designs that have been prepared include all environmental provisions needed to achieve complete stability.
- 3.17 In rehabilitating the roads, program activities are generally designed to mitigate the adverse effects of the disaster. The environmental impact will therefore tend to be positive and of high social benefit. Below is a description of the legal framework, the general criteria and the activities provided for as part of the program's management and environmental supervision.

- 3.18 **Legal framework for environmental management.** The General Environmental Law (LGA), enacted in 1996, establishes the legal and regulatory framework for addressing environmental issues in Nicaragua. The Ministry of the Environment and Natural Resources (MARENA) is the regulatory institution for environmental matters, and its responsibilities and primary functions include policy preparation, supervision, monitoring and the award of environmental licenses.
- 3.19 The LGA provides, inter alia that: (i) in the case of projects producing a significant environmental impact, environmental and social impact assessments (EIA's) must be prepared; (ii) recommendations arising from the environmental management action plans (PAMA's) and the EIA's, must be incorporated in the project design and execution; (iii) projects must undergo a public consultation process; (iv) an environmental license must be obtained before engaging in a project having an environmental impact; and (v) projects are subject to environmental audits requested and conducted by a designated authority.
- 3.20 **General principles.** Program activities will be guided by the following general principles:
- (a) Sustainability. Early evaluation of environmental impact to permit prevention, mitigation or compensation of adverse consequences.
  - (b) Environmental quality control procedures for the reconstruction and rehabilitation works on each section of the highway, which will include the following: (i) a preliminary environmental evaluation carried out by the MTI/EU; (ii) preparation of the EIAs by MTI/EU with the support of a consulting firm; (iii) environmental feasibility certification by MARENA; (iv) supervision of mitigation measures by MTI/EU, with verification by the companies supervising the sections to be rehabilitated and reconstructed; and (v) overall environmental evaluation upon completion of the program.
  - (c) Verification that Program activities do not negatively affect parks and protected areas, cultural assets, or areas that are environmentally fragile or subject to high ecological risk.
  - (d) Early and extensive participation by the affected population.
  - (e) The proposed rehabilitation will be carried out on existing corridors and no expansion of the road width is anticipated, for which reason no resettlement of the population will be required. However, should resettlement prove necessary, Bank procedures will be followed.

- 3.21 Based on application of the general principles above, environmental evaluations have been carried out of the six sections of highway and environmental certification has been obtained from MARENA for the three sections between Sébaco and El Espino. The other certifications are in process, but no difficulties are expected, given that because of the nature of the proposed rehabilitation, the works will not produce any significant environmental or social impact. The population and authorities in the project area have been surveyed; the works required for protection of the slopes and on bridge accesses have been identified, including the dredging and protection of river beds; and the costs of the environmental protection works have been incorporated into the budgets. In all cases compliance with the country's environmental laws and regulations, and inclusion of the agreed environmental specifications in the works design, road construction and maintenance contracts, will be verified.
- 3.22 **Sectoral environmental management and supervision.** Within the LGA framework, MTI/EU, in coordination with the MARENA, is responsible for the environmental aspects of road projects. This process is still in an early stage and the EU has still not consolidated environmental management within MTI or effectively incorporated environmental analysis throughout the project cycle. Accordingly, for the purpose of monitoring the environmental impact of this program, MTI/EU will be reinforced with an environmental specialist. The functions of this specialist will be as follows: (i) to evaluate and verify the environmental eligibility of programs and projects in accordance with the general and sectoral criteria established for the program; (ii) to organize, analyze and systematize the environmental information; (iii) to ensure compliance with the environmental mitigation measures and environmental management plan; (iv) to ensure performance of the respective environmental impact evaluation studies, if required for the reconstruction projects, and (v) to develop the procedures to provide for consultation with, and advance notice to, the affected population.
- 3.23 To review the effectiveness of environmental management, the supervisory firms for the works must use environmental experts. Upon completion of the program it is proposed that an independent environmental evaluation be conducted with a view to obtaining recommendations applicable to future operations.

#### IV. PROGRAM FEASIBILITY AND RISKS

- 4.1 This program will contribute to recovery of the level of economic activity, agricultural production and standard of living of rural communities, facilitating rehabilitation of the road infrastructure needed for adequate and permanent access to markets and basic social and economic services. The projects forming part of this operation were selected in consideration of the rehabilitation priorities defined subsequent to Hurricane Mitch, and will allow the country to recover the road corridor supporting its economic base and facilitating regional integration.
- 4.2 The technical, institutional, financial, economic, environmental and social feasibility of this operation have been established, taking into consideration the execution capacity of the MTI and the PCU as demonstrated during execution of the REMECAR and REMEVAL programs, as well as during the emergency service process.
- A. Institutional and technical feasibility
- 4.3 The rehabilitation and the reconstruction works to be carried out during the program present no great difficulty from a technical standpoint, as sufficient capacity and experience is available to adequately execute them, both in the MTI and in private companies. For purposes of supervising the civil works and engineering studies of the program works, the PCU will have the support of consulting services from specialized firms.
- 4.4 The Pan-American Highway was constructed approximately 28 years ago, and has been maintained very sporadically. The highway runs along a great length of flat landscape, with the remainder along rolling landscape, with very good horizontal and vertical geometric conditions. The highway is stable and its surface condition is acceptable with very few areas of deformation. The highway's use life is about to expire and Hurricane Mitch has accelerated this condition. The slopes are adequate, although there have been slides along certain localized segments, due primarily to the saturation experienced during Hurricane Mitch, aggravated by scarce and sporadic maintenance and inadequate sub-drainage. The roadway lacks horizontal and vertical signaling and has no guard rails, leaving much to be desired from a safety standpoint.
- 4.5 Based on a physical survey and the available data, rehabilitation will primarily consist of a recycling and scarification of the existing road surface. In the areas of deformation, disintegration and disaggregation, the base will be scarified and, if necessary, improved by applying a granular base, or reinforced with asphalt material. In general, an asphalt layer of 2-3 inches will be laid along the entire length of the highway, with a width of 7.30 meters, along with lateral berms with a variable asphalt treatment.

For preventive purposes, lined ditches and drains will also be replaced where necessary and slopes will be treated, with special provisions taken in the slide areas. Horizontal and vertical signaling will be completed and road safety devices will be installed where necessary, particularly in urban areas.

- 4.6 The primary objective of the final engineering designs now underway is to define the structural capacity of the pavement to withstand an extension of the highway's use life by 20 years. The project designs forming part of the works and the corresponding technical and environmental specifications will be available during the first quarter of 1999, and will contain the information necessary for contractors to submit their proposals with complete knowledge of the responsibilities and obligations they will assume in the respective contracts. The estimated quantities and budgetary base for each work are being prepared within margins of permissible error, particularly taking into consideration the nature of the works and variations which may occur between the study preparation date and initiation of the works. In anticipation of these changes, a requirement has been included that the supervisors verify and adjust the quantities of works, before the contractor begins each of the activities included in the contract.

B. Economic and financial feasibility

- 4.7 The findings of the cost-benefit analysis for the six sections covered by the project are provided in Table IV-1. The costs include investment in works, and in their design and supervision; the benefits consist of economies in the areas of maintenance, vehicle operating costs, and estimated passenger travel time over a period of 15 years as a result of the rehabilitation of these sections to provide a higher level of service. The internal rates of return (EIRR) and the net present value (NPV) of the benefits are relatively high, primarily because of the traffic volumes concerned - which consist largely of cargo and passenger transport vehicles - and because the rehabilitation investments are for the purpose of returning previously constructed infrastructure to operation. The cost-benefit ratios (C/B) are also high, indicating that the project's economic return would be maintained even if costs should prove higher or benefits lower than expected.

TABLE IV-1						
Economic evaluation by section						
Sections	length (km)	Traffic vol.	investment (US\$ million)	EIRR %	NPV (US\$ million)	C/B
San Benito-Sébaco	69	3,348	15.7	91.2	134.8	11.1
Sébaco-Estelí	43	3,088	9.7	66.7	55.5	7.7
Estelí-Yalaguina	61	2,285	14.5	84.3	112.4	10.1
Yalaguina-El Espino	31	954	7.8	31.2	10.5	2.6
Tipitapa-Las Flores	28	2,313	6.8	41.5	17.6	4.0
Las Flores-Nandaime	27	2,539	7.6	64.8	41.6	7.4
<b>Total (average)</b>	259	(2,421)	62.1	(63.3)	372.4	(7.2)

- 4.8 The program will generate benefits to the population in the areas of influence of the PH, approximately 75% of which falls below the poverty line. The beneficiary population, which is primarily engaged in agricultural work, relies heavily on collective passenger transportation and small cargo transportation vehicles, and will thus benefit in terms of better access to health and education services, markets and places of employment.
- 4.9 The government's limited budgetary capacity has barely been sufficient to afford routine maintenance to only 17% of the network and periodic maintenance to 20%, even though almost the entire paved network has received both types of maintenance. With the approval of the FOMAV, this situation will gradually be reversed and the sustainability of service levels of the rehabilitated network will be ensured through program funding from the Bank and the longer term reconstruction and transformation program. The resources for FOMAV were calculated on the basis of historic costs for routine and regular maintenance, and are believed sufficient to provide for routine and regular maintenance of 80% of the paved system and 60% of the unpaid system, i.e. 100% the roads considered maintainable.
- 4.10 Table I-3 shows the needs of the road sector during the 1999-2002 period, which total US\$141 million per year. Based on the favorable initial response by the international community to requests for support for the country's reconstruction, which will alleviate resource needs in other sectors, and in view of user efforts through FOMAV, it may be concluded that the government will be capable of making its counterpart contributions on a timely basis for normal execution of the program with the Bank.

C. Environmental and social feasibility

- 4.11 The activities included in this program are intended to reduce the adverse effects of Hurricane Mitch, and therefore their environmental impact will tend to be positive and of high social

benefit. Nevertheless, in order to minimize any possibility of environmental damage, general principles have been established for the program concerning sustainability, procedures for monitoring environmental quality, verification that the country's environmental laws and regulations are being followed; protection of parks and protected areas, cultural assets, and fragile environmental areas of high ecological richness; and participation by the affected population. MIT/EU will monitor environmental impact, with support from an environmental specialist whose terms of reference have been agreed to with the Bank.

D. Program risks

- 4.12 The program faces risks primarily with respect to the continuity and level of road system maintenance, and the currently poor condition of the structure for financing, planning and managing road upkeep. In order to mitigate this risk, the program will continue to support reform of the system and the establishment of sustainable financing mechanisms for maintenance. This project will impose new technical, administrative and coordination requirements on the various facilities of the MTI, and it is therefore proposed that funding be included in the Bank's financing, for strengthening such areas.

**LOGICAL FRAMEWORK  
PAN-AMERICAN HIGHWAY REHABILITATION PROGRAM (NI-0099)**

OBJECTIVE	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>the recovery of levels of y, agricultural production and g of rural communities, ilitation of the road corridor quate and permanent access basic social and economic</p>	<p>To ensure the GDP growth rate assumed in the economic program agreed to with the IMF (ESAF).</p> <p>20% reduction in vehicle operating costs on the various sections to be rehabilitated.</p>	<p>National accounts statistics from the Central Bank.</p> <p>Review of the economic evaluation of a representative sample of the rehabilitated sections.</p>	<p><b>(Goal/overall target)</b></p>
<p>ts to reconstruct sections of an Highway affected by , and to consolidate the road maintenance.</p>	<p>Reestablishment of the Pan-American road corridor by the year 2002</p> <p>At the end of the program, FOMAV should have met the targets of the three-year maintenance plan: 80% of the paved system and 60% of the unpaved system. In addition, the MTI should have completed execution of the institutional strengthening plans to equip it as a regulatory agency for the sector.</p>	<p>Program progress report.</p> <p>Annual maintenance report.</p>	<p><b>(Purpose/goal)</b></p> <p>The international community contri Nicaraguan recovery efforts.</p> <p>The government continues its polic supporting maintenance as a basic development of social and product infrastructure in the country.</p>
<p>on of the Pan-American</p>	<p>San Benito — Sébaco section (69 kms.) Rehabilitated by the end of 2002.</p> <p>Sébaco — Estelí section (43 kms.) Rehabilitated by the end of 2002.</p> <p>Estelí — Yalaguina section (61 kms.) Rehabilitated by mid-2002.</p> <p>Yalaguina — El Espino section (31 kms.) Rehabilitated by mid-2002.</p> <p>Tipitapa — Las Flores section (28 kms.) Rehabilitated by mid-2002.</p> <p>Las Flores — Nandaime section (27 kms.) Rehabilitated by the end of 2002.</p>	<p>Program progress reports. Supervision reports.</p>	<p><b>(Component/goal)</b></p> <p>MTI, the IDB and the various nation authorities grant the priority require addressing this rehabilitation on a basis.</p> <p>The natural conditions in the proje favorable.</p>

OBJECTIVE	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
FOMAV with seed capital to maintenance work on main and production roads.	1,500 kilometers of main highways and production roads periodically maintained by private companies through the FOMAV during the three years of the program with MTI funding and seed capital.	Annual Maintenance Report	<ul style="list-style-type: none"> <li>– Creation of the FOMAV</li> <li>– Institutional strengthening program executed</li> </ul>
strengthening of the MTI and	<p>General Roads Office, General Planning Office and Environmental Unit of the MTI strengthened, trained and equipped upon completion of the first year of execution of the program.</p> <p>The General Maintenance Plan prepared and the Pavement Administration System in operation upon completion of the first year of the Program</p> <p>The FOMAV operating and duly trained and funded by the end of the program.</p>	Progress reports for the program. Consulting reports.	
cting and execution of works for the various program	Goals in accordance with the acquisition and bidding plan (Annex A-III-1) and the schedule for bidding processes and execution (program technical files)	Program progress report. Hearings report. Supervision reports.	

NICARAGUA  
PAN-AMERICAN HIGHWAY REHABILITATION PROGRAM (NI-0099)

PROCUREMENT AND BIDDING PLAN

	AMOUNT US\$000	FINANCING			Methods	Prequali- fication	Publication of the GPN
		IDB	COFIN	LOCAL			
	1/						
<b>GOODS:</b>							
Trucks (12)	400	84%	0%	16%	IPB	NO	N/A
Computer Equipment/Programs (20)	100	84%	0%	16%	IPB	NO	N/A
Communications Equipment	100	84%	0%	16%	IPB	NO	N/A
<b>CIVIL WORKS:</b>							
<b>Pan-American North Corridor</b>							
San Benito – Sébaco (69 kms.)	16,500	84%	0%	16%	IPB	2/	1st half 99
Sébaco – Estelí (43 kms.)	9,700	84%	0%	16%	IPB	2/	1st half 99
Estelí – Yalaguina (61 kms.)	14,500	84%	0%	16%	IPB	2/	1st half 99
Yalaguina – El Espino (31 kms.)	8,100	84%	0%	16%	IPB	2/	1st half 99
Tipitapa – Las Flores (28 kms.)	7,200	0%	84%	16%	IPB	2/	2nd half 99
Las Flores – Nandaime (27 kms.)	7,800	0%	84%	16%	IPB	2/	2nd half 99
Bridges	3,600	0%	84%	16%	IPB	2/	2nd half 99
<b>Road Maintenance (FOMAV)</b>							
Highways and Roads	2,300	84%	0%	16%	NPB/ LPRI/COM	NO	n/a
<b>CONSULTING SERVICES:</b>							
Advisory services to the PCU	950	84%	0%	16%	IPB	YES	1st half 99
Engineering and Studies	250	84%	0%	16%	IPB	YES	2nd half 99
Outside Auditing	400	84%	0%	16%	IPB	YES	2nd half 99
IDB Works Supervision	3,300	84%	0%	16%	IPB	2/	1st half 99
COFIN Works Supervision	1,700	0%	84%	16%	IPB	2/	2nd half 99
MTI Strengthening (DGV/PMS, DGP, EU)	600	84%	0%	16%	IPB	YES	2nd half 99
FOMAV Strengthening	600	84%	0%	16%	IPB	YES	2nd half 99

Notes: 1/ = Includes direct costs, contingencies and IGV.  
2/ = Update of prequalification with the bid  
IPB = International Public Bid  
NPB = National Public Bid  
LPRI = Private Bid  
COM = Contracts with Community Participation

RGII-NI139P  
NI-0099  
Original: Spanish

PROPOSED RESOLUTION

NICARAGUA. LOAN \_\_\_/SF-NI TO THE REPUBLICA DE NICARAGUA  
(Program for the Rehabilitation of the Panamerican Highway)

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 República de Nicaragua, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a program to rehabilitate the Panamerican Highway. Such financing will be for the amount of up to US\$50,000,000, or its equivalent in other currencies, except that of Nicaragua, which are part of the resources of the Bank's Fund for Special Operations, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.