

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

JAMAICA

**TRANSPORTATION INFRASTRUCTURE
REHABILITATION PROGRAM**

(JA-L1016)

LOAN PROPOSAL

This document was prepared by the project team consisting of: Brian Mc Nish (TSP/CTT), Project Team Leader; Alejandro Taddia (INE/TSP); Diego Buchara (LEG/SGO); James Campbell (PDP/CTT), Silvano Tjong Ahin (CCB/CSU); Rosemarie Morgan (PDP/CJA); Glaister Cunningham (CCB/CJA); Giovanna Mahfouz (INE/TSP); German Silva Fajardo, Ione Müller and Hernan Pflucker (Consultants).

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ANNEXES

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ANEXO I: Results Framework

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ELECTRONIC LINKS

REQUIRED

1. POA
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1570782>
2. Monitoring & Evaluation Arrangements
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1570781>
3. 3. a Environmental and Social Impact Report
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1571245>
3. b Environmental and Social Impact Mangement Plan
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1571237>
4. Procurement Plan
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1570936>
5. Safeguard and Screening Form for Screening and Classification of projects (SSF)
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1645778>

OPTIONAL

1. Institutional analysis/personnel, procedures other aspects of implementation capacity
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1576992>

ABBREVIATIONS

CDB	Caribbean Development Bank
EC	European Commission
EDF	European Development Fund
ESMP	Environmental and Social Management Plan
ESMIP	Environmental and Social Management Implementation Plan
EU	European Union
GOJ	Government of Jamaica
IDB	Inter-American Development Bank
KFAED	Kuwait Fund for Arab and Economic Development
MTW	Ministry of Transport and Work
NCHIP	Northern Coastal Highway Improvement Program
NEAP	National Emergency Assistance Program
NEPA	National Environment and Planning Agency
NIP	National Indicative Program
NRP	National Roads Policy
NRSIP	National Road Service Improvement Program
NTP	National Transport Policy
NWA	National Works Agency
OPEC	Organization of the Petroleum Exporting Countries
PEU	Project Executing Unit
PIOJ	Planning Institute of Jamaica
RMF	Road Maintenance Fund
RMMP	Road Maintenance Master Plan
RMMS	Routine Maintenance Management System
WB	World Bank

PROJECT SUMMARY
JAMAICA
TRANSPORTATION INFRASTRUCTURE REHABILITATION PROGRAM
(JA-L1016)

FINANCIAL TERMS AND CONDITIONS			
Borrower: Government of Jamaica Executing Agency: Ministry of Transport and Works, through the National Works Agency.		Amortization Period:	25 Years
		Disbursement Period:	5 years
Source	Amount	Supervision and Inspection Fee:	*
IDB (OC)	US\$50,000,000	Interest Rate:	Adjustable
Local	0	Credit Fee:	*
Total	US\$50,000,000	Currency:	US\$, single currency facility
PROJECT AT A GLANCE			
Project Objective/Description: The general objective of the program is to support the restoration of Jamaica's road transportation system through the rehabilitation of vital portions of the primary road network which have been damaged due to storms and to thereby help stimulate economic activity and improve the quality of life of the Jamaican population. The specific objectives include (i) rehabilitation of essential portions of the main road system (ii) minimize the impact of future flooding on the road system (iii) contribute to the decrease of travel cost for road system users and (iv) strengthening the National Works Agency.			
Special contractual conditions: (a) Prior to first disbursement the Executing Agency: (i) has hired/appointed the Project Manager, the Environmental expert and the certified accountant or similar combination of qualifications and experience pursuant to terms of reference previously approved by the Bank; (ii) has presented to the Bank, and the Bank has approved a staffing plan for the strengthening of the Program Executing Unit ("PEU"); and (iii) has presented to the Bank evidence that it has an appropriate system of internal accounting and administrative controls pursuant to Article 7.01 of the General Conditions. (b) Prior to the tendering of complex civil works, the Executing Agency has submitted to the Bank, for its no objection the engineering studies, including technical designs as well as the environmental studies. (c) Prior to tendering the civil works, the Executing Agency will incorporate in the bidding documents: (i) the Environmental and Social Management Plan, including its mitigation, management, supervision, monitoring and training provision. (d) Prior to tendering the Hope River Bridge the Executing Agency will incorporate in the bidding documents: (i) the Environmental and Social Management Plan, including its mitigation, management, supervision, monitoring provision as well as the requirement that the contractor hire Environmental Engineers as part of their field personnel. (e) Prior to tendering the supervision services, the Executing Agency will incorporate in the bidding documents the requirement that the Supervisory Firm shall hire an Environmental Inspector as part of its personnel.			
Exceptions to Bank policies: None			
Project qualifies for: SEQ[No] PTI[] Sector[] Geographic[] Headcount[]			
Procurement: See Paragraph 3.4			

(*) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable provision of the Bank's policy on lending rate methodology for ordinary capital Loans. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the Loan amount divided by the number of six-month periods included in the original disbursement period.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, Problem Addressed, Justification

- 1.1 **Background:** Jamaica enjoys a widespread though aging road network, which according to the World Bank has the highest normalized road index of all countries (752). A high road index is indicative of a country where the network of roads is both dense and extensive. For a country with a total area of 11,000 sq km the total length of the road system including national and parish roads is approximately 15,700km. Highways and roads of national importance (the “national road network”) account for 29% of the roads i.e. 5,006km which falls under the jurisdiction of the National Works Agency (NWA) and includes arterial roads 1,561km, secondary and tertiary roads 3,445 km. Except for about 360km classified as agricultural and forestry roads, the parishes administer the remaining 10,334km; of which 80% are paved.
- 1.2 However, due to a decade of annual year on year decline in the road maintenance budget allocations, by the turn of the millennium Jamaica’s dense road network, had degenerated into a state of disrepair receiving a poor grading following a condition survey completed in 1999.¹ In an attempt to break out off the road failure cycle, the Government of Jamaica (GOJ) coordinated with the European Commission (EC) and the Bank to support a plan to develop a national transportation framework which would guide redevelopment of the sector while it concomitantly embarked on vital medium-term road investments balanced amongst periodic road rehabilitation, routine maintenance and trunk road expansion through Public Private Partnerships (PPP).
- 1.3 Accordingly, the Bank since 2001, has been supporting this strategy through a triad of operations; (i) the US\$59.5M Northern Coastal Highway Improvement Program (NCHIP) Loan 972/OC-JA focused on road improvement and rehabilitation, (ii) the US\$18.5M National Road Service Improvement Program (NRSIP) Loan 1363/OC-JA focused on the preservation of the road network by supporting improvement and reengineering of the systems of road maintenance and (iii) the recently approved (Jan 2008) US\$10M National Emergency Assistance Program (NEAP) Loan 1959/OC-JA, focused on supporting emergency improvement and rehabilitation to the road network following hurricane and flood damage.
- 1.4 Additionally, since 2004 with the assistance of the EC under the 9th European Development Fund’s (EDF), National Indicative Program (NIP) three key studies have been developed which provide a comprehensive strategic framework for the development of the sector in general and for the redevelopment of the road network in particular. These are (1) The National Transport Policy (NTP), an essential pre-condition for EDF support to the transport sector, which provides a diagnostic of the sector analyzing, air, sea, rail and road transportation and which

¹ Road Inventory and Condition Survey, 1999

also provides an elaboration of policy for the sector. The NTP was completed in 2004 and approved by Cabinet in 2005. (2) The National Road Policy (NRP), a complementary study to the NTP, focuses specifically on the amplification of policy for road transportation and was finalized in the second semester of 2005 again under financing of the 9th EDF and was subsequently approved by the Ministry of Transport and Works (MTW). The third important study prepared was (3) the Road Maintenance Master Plan (RMMP) which justifies and identifies options, and scenarios based on funding availability and serves to guide road maintenance investment priorities required in Jamaica over five years to 2012. This document presents the data, information, analysis and justification for road interventions on the network. It was completed in October 2007 and has since been endorsed by the current Government which took office recently in 2007.

- 1.5 The Bank's experience during the execution of its active programs has revealed that impediments to road infrastructure projects relate mainly to (i) a lack of counterpart resources linked to national budget constraints and (ii) issues related to the bureaucracy of land acquisition, resettlement and timely utility relocation.
- 1.6 **The Bank's Program:** The Bank's active programs have also been collectively contributing albeit slowly since the year 2002, to incrementally improving the condition of the road network, and in building significant, self-sustaining and important institutional and systemic reforms within the NWA to manage road maintenance in Jamaica. The NCHIP in particular has contributed to the improvement and rehabilitation of the Northern Coastal Ring Road in Jamaica and will be completed by year's end 2008. The NRSIP has introduced cost effective performance based road maintenance contracts which are being managed using an informatics Routine Maintenance Management System (RMMS) which provides data, information, analyses and justification for optimum road maintenance expenditure. NRSIP has also supported since July 2003 the operationalization of a Road Maintenance Fund (RMF).
- 1.7 **Government Issues:** To ensure the sustainability and permanently enshrine the RMMS into the management of roads requires the definition, and classification of new post within the establishment of the NWA. Additionally, according to the RMMP the current resources received by the RMF represent about 50% of the minimum annual needs for routine road maintenance. In moving forward donor coordination through the 9th EDF will assist the GOJ to study alternative modalities of additional funding to support its prioritized program of periodic and routine maintenance and in defining and elaborating new job specifications to support the RMMS.
- 1.8 **Problem Addressed:** Notwithstanding, these institutional achievements over the last five years climatic events together with budget constraints have conspired to erode road network gains, as Jamaica experienced heavy torrential rains and flooding starting in 2002, followed by more floods in the wake of hurricane Ivan in 2004, hurricane Dean in 2007 and Tropical Storm Gustav in 2008. The cumulative effect of storm water runoff allied with the lack of effective

watercourse maintenance damaged significant parts of the national road network and related infrastructure maintained by the NWA including following Tropical Storm Gustav the washing away of the important Hope River Bridge the most viable access point for the populations of East St Andrew, St Thomas and parts of Portland into the capital city of Kingston. The alternative route along the North Coast for these nationals into Kingston is at least twice as long. Given the significance of this bridge and the urgent need to replace it this operation will support its replacement on terms of design and build using limited ICB. According to the RMMP an annual budget of US\$17 million is required to repair and maintain the network at an acceptable level. Small contributions to the overall required level of maintenance funding required, combined with the island's mountainous terrain, and the impact of hurricanes and or damage from flooding has contributed significantly to the present road failure cycle. The condition survey² conducted in 2005 to update the Agency's road condition with the survey done in 1999 is based on a partial survey of 50% of the main road network. The results are summarized in the table below.

PARTIAL MAIN ROAD CONDITION SURVEY FOR YEAR 1999 AND 2005

Road Classification Class	Condition/Km			Total (Km)
	Good	Fair	Bad	
A	236	235	66	537
B	50	283	135	468
C	31	410	1,130	1,571
Total	317	928	1,331	2,576
1999 Percentage	28%	28%	44%	
2005 Percentage	12%	36%	52%	

'A': roads of national importance which carry daily traffic volumes in excess of 1000 vehicles linking one or more major area/town of the island with other major areas/town. (Total: 844 km)

'B': of regional importance which connects with arterial roads and normally carry average daily traffic volumes of 1000 to 8000 vehicles. (Total: 717 km)

'C': normally only of local importance and have a function of allowing communications and contact within districts. C roads normally serve traffic volumes less than 1500 vehicles per day. (Total: 3225 km)

- 1.9 The survey data shows that in 2005, 317km or 12% of the network was classified as good, down from 721km or 28% of the network in 1999 which represents a 57% decrease in the quantity of roadway defined as "good" between 1999 and 2005. It is evident that the condition of the main road network has deteriorated appreciably since the 1999 survey. These features of the Jamaican road system clearly have repercussions and translate into high logistical cost and a compromised national standard of living. This situation is a threat to the long-term developmental objective of the GoJ which is based on investments that foster private sector productivity improvements which require a safe and reliable road network that facilitates the movement of goods and services.

² National Works Agency Corporate Plan 2007 -2010

- 1.10 The availability of sufficient resources for road maintenance has been another recurrent problem in Jamaica. With respect to the RMF the flow of funds traditionally has been insufficient and available amounts traditionally have not coincided with the seasonal demand for road works, creating a cyclical cash flow problem that does not permit the budgeted resources for maintenance to be used efficiently. The 9th EDF will provide the technical support to establish mechanism and incentives that assure sufficient funds are dedicated in a timely manner to road maintenance with donor coordination.
- 1.11 Country Strategy: The Island's road infrastructure is a necessary input to facilitate greater private sector efficiency and competitiveness in support of the Government of Jamaica's strategy of market liberalization based on an export-led growth model. Government's developmental efforts have been focused on creating an environment conducive to attracting and increasing investment, fostering private sector growth and increasing levels of productivity. The adoption of this long-term strategy is to achieve sustainable high growth through investment promotion, particularly, for dynamic and competitive export segments of the economy. Consistent with this strategy the Government has recognized that, in order to achieve these growth objectives, seminal efforts will have to be aimed at promoting greater private sector productivity and efficiency, by upgrading and maintaining the economic social and physical infrastructure.
- 1.12 Aligned with this strategy, Government's Tourism Master Plan outlines plans to improve the quality of the tourism product and, diversify the sector and accommodations away from large all-inclusive hotels and promote development of new areas like Portland and other South Coast attractions, integrating nature and heritage in addition to beach tourism. As many of the natural assets lie on the less developed south-side of the island as well as in the hinterland. This new thrust in eco-tourism is being encouraged, through infrastructure projects such as the North Coast Highway Improvement Project funded in part through IDB Loan 932/OC-JA, NCHIP Negril to Port Antonio road. Government as part of the activities in the sector is now considering as a logical next step feasibility studies for the upgrade of road linking Port Antonio to Kingston as a first step to improving the Southern Highway Corridor of the island.
- 1.13 Bank's strategy: The program of works is consistent with the Bank's strategy in the country which sets out three principal areas of focus: (i) private sector development; (ii) getting value for money; and (iii) reducing vulnerability to natural disasters. Impaired road infrastructure has a detrimental effect on the business environment, productivity and private sector development, as the ability to efficiently move goods and services, and leverage the country's resources towards economic growth is impeded. Addressing the state of the road network through a program of rehabilitation and preventive works will serve as a complementary input to facilitating the business climate and towards private sector development. Road rehabilitation and maintenance activities are also aligned with the Bank's third strategic pillar of reducing Jamaica's vulnerability to natural disasters, through prevention and mitigation activities.

- 1.14 Justification: The Government of Jamaica has already begun to address the problem with Bank assistance through NEAP LO 1959/OC-JA, which has allowed the Jamaican Government to respond to immediate and urgent road network repairs. The proposed Transport Infrastructure Rehabilitation Program is a second stage response to the problem, which will operate seamlessly in sync with the emergency Loan where possible to build on it to support short to medium term restorative and rehabilitative work on the main road network. Together, these operations will respond to the GoJ's two requests for US\$32 and US\$28 million for an aggregate of US\$60 million to restore the main road network in an effort to normalize economic development through the restoration of mobility, safety and reliability on the road network and improve the life of the Jamaican population following the flood events.
- 1.15 Coordination among other donors: The Bank is a central agent in a concerted effort with other agencies such as the Caribbean Development Bank (CDB) who has approved US\$20 million for road repairs, along with an approved US\$10 million Loan from the World Bank (WB) for road rehabilitation. The European Union (EU) pursuant to the 9th EDF has also given support in the amount of € 13 million for the National Transportation Policy (NTP) and the RMMP providing the roadmap for interventions and investments and the basis for coordination in the sector. € 10 million is targeting augmentation of budgetary assistance for road maintenance support, providing the necessary resources to protect and maintain the investment. Kuwait, under its KFAED, and OPEC have provided resources of US\$12.4 million and US\$20 million respectively for rehabilitation of rural and urban roads respectively. The Planning Institute of Jamaica (PIOJ) has been the pivotal cross coordinator in participation of the CDB, WB, EU, Kuwaiti, OPEC and the IDB and reflects the GOJ's commitment to the sector and its coordinated strategy of donors' participation in the road sector.

B. Objective, Components and Cost

- 1.16 **Objective:** The general objective of the program is to contribute to the restoration of Jamaica's transportation system allowing the reestablishment of adequate operating conditions through the rehabilitation of vital portions of the primary road network which have been damaged due to storms and to help stimulate economic activity and improve the quality of life of the Jamaican population. The specific objectives include: (i) rehabilitation of essential portions of the main road system and ensuring physical continuity of the primary network; (ii) minimize the impact of future flooding on the road system; (iii) help decrease travel cost for road system users which will in turn benefit access to social services and economic spaces; and (iv) strengthening the NWA in order to improve the capacity to strategically address key reform issues towards improved road transport policy and regulation covering RMMS, RMF and future road improvement investments on the Southern Coastal Link.
- 1.17 **Program Components:** The program will be implemented over a five-year term and will include three components: (i) **Civil works** will support the rehabilitation

and improvement of selected primary roads on the main road network, including the replacement of the Hope river bridge, river training works and construction of retaining walls, (ii) **Project Implementation Support** will center on supporting staff for the project execution unit, and in providing ancillary (environmental and engineering) professional support; and (iii) **Technical studies** will provide support for technical assistance and studies to inform future supplementary interventions. Each component is described in detail below.

1.18 **Component 1 – Civil Works (US\$45.2 million).** Under this component roads and bridges under the purview of the NWA will be selected for rehabilitation. The works to be eligible must:

- i. be part of the national main road network system comprising 5006km
- ii. have a budget allocation provided for the corresponding year
- iii. for the replacement of the bridge and for complex rehabilitation works the projects should be economically feasible, i.e., the economic rate of return shall be at least 12%
- iv. be environmentally feasible thereby complying with the country's environmental legislation and Bank Policies³
- v. have standard designs prepared for simple works and final designs for complex works and final designs for the Hope River Bridge reconstruction and must have incorporated mitigation measures to prevent correct or compensate direct environmental impacts.
- vi. have clearance of the right of way before signing the contract for civil works.
- vii. Must provide evidence that there is no need to resettle any citizen.

1.19 The scope of work in this component is expected to fall into three groups of works: (i) simple rehabilitative works comprising straightforward works consisting of deep patching, milling, sealing cracks, repairs to longitudinal drains, road markings and median restoration. It will include repair of surface distress, pavement strengthening where eroded and reduction of roughness, reconstruction of inadequate drainage facilities, and retaining walls which will only require simple standard designs and the implementation of the Environmental and Social Management Plan; (ii) complex rehabilitative works comprising bridges restoration, river training, embankment stabilization and sea defense works as well as improvement of geometrical and structural characteristics requiring detailed designs and more important engineering and environmental studies prior to construction; and (iii) the complete design and replacement of the Hope River Bridge.

1.20 **Component 2 – Project Implementation Support (US\$2.8 million)** This component will directly support the hiring of the project manager, the project

³ Environment and Safeguards Compliance Policy (OP-703); Involuntary Resettlement (OP-710); Natural Disaster (OP-704); Indigenous People (OP-765); Disclosure of Information (OP-102)

accountant and an environmental expert to manage the day to day technical, socio-environmental, financial and administrative aspects of the project and the hiring of an engineering and supervisory consultant firm on a competitive basis to monitor and oversee the implementation of the proposed construction of the civil works. This component will also provide resources for minor office equipment and the hiring of financial and environmental auditors and a monitoring and evaluation consultant to respectively conduct the audits and to track and monitor the results of the operation.

- 1.21 **Component 3 – Technical Studies (US\$ 2.0 million).** This component provides resources to undertake engineering and environmental feasibility studies pertinent to the rehabilitation of future restoration or improvement of road sections. Amongst the possible studies Jamaican authorities have considered developing feasibility studies for the Southern Highway Corridor focusing on continuing the main road-network circumscribing the island in keeping with GOJ's strategic development plan for the south coast of the island.
- 1.22 **Project Cost.** The Bank will finance the total cost of the project with a loan up to US\$50M, from the Ordinary Capital (OC) resources. The estimated total cost of this project does not include counterpart resources. Bank financing was dimensioned based on priority sector investment needs identified following a Preliminary Assessment of the Socio-Economic and Environmental Impact of Hurricane Dean- September 2007 the identified impact of Tropical Storm Gustav, and the RMMP.
- 1.23 The following table presents the total program cost estimate of US\$50 million. Bank financing will be provided as an investment Loan for multiple works. The costs reflect current market conditions confirmed by the ongoing procurement of the National Road Services Improvement Program.

Transportation Infrastructure Rehabilitation Program Total Cost and Sources of Financing (in millions of US\$)			
Components and Investment Categories	Bank	Total	%
<u>1. Civil Works</u>	<u>45.2</u>	<u>45.2</u>	<u>90</u>
1.1 Simple Rehabilitative works	7.0	7.0	14
1.2 Complex Rehabilitative works	24.2	24.2	48
1.3 Replacement of Hope River	14.0	14.0	28
<u>2. Project Implementation Support (program management personnel & equipment)</u>	<u>2.8</u>	<u>2.8</u>	<u>6</u>
2.1 Engineering and Supervision consultant	1.5	1.5	3
2.2 Project Execution Unit	1.0	1.0	2
2.2.1 Consultants	0.8	0.8	2
2.2.2 Office equipment and Supplies	0.2	0.2	0
2.3 Audit and Evaluation ^(a)	0.3	0.3	1
<u>3. Technical Studies</u>	<u>2.0</u>	<u>2.0</u>	<u>4</u>
3.1 Feasibility Study Southern Highway Corridor	2.0	2.0	4
TOTAL	50.0	50.0	100

NOTES: (a) Audit and evaluation costs for the entire operation

C. Key Results Indicators

- 1.24 A comprehensive monitoring and evaluation system will continuously assess the program's impact. To facilitate monitoring the attainment of these targets the following indicators have been considered: (i) Percentage of the 5006 Km of Primary Roads Rehabilitated will track the contribution of the program to the restoration and protection of Jamaica's transportation system; (ii) Travel time an outcome indicator will be used to proxy the tracking of improved quality of life. This indicator is used on the basis that faster service translates into added value to the population, this indicator is chosen because it's inexpensive to validate and collect information; (iii) vehicle-operating cost together with the percentage of accidents due to bad roads will be used to scrutinize how the project has contributed to reestablishing adequate operating conditions on the network. These indicators have been chosen since historical data of this information have been compiled and archived since 2002 by the MOTW Statistical Unit since 2002, who produces an Annual Transport Statistics Report.
- 1.25 The proposed indicators and means of verification maximize the use of the information that MTW and the NWA will collect directly or indirectly during the execution of the project. Most of the proposed indicators already have baseline data collected since 2002/2003. This baseline is the reference level for the evaluation of the program. All the output indicators will be measured directly by a monitoring consultant of the NWA to be hired under the program. The outcome indicators will be either measured directly by MTW and/ or NWA or indirectly by the Police in the case of road accidents. These measures and estimates will be compared with the expected outputs and outcomes presented in the Results Matrix. The following table presents the selected indicators and their respective means of verifications.

INDICATOR	MEANS OF VERIFICATION	FREQUENCY
OUTCOMES		
Reduction in the percentage of accidents due to bad roads.	Semi annual progress reports, submitted on 12/31 of each year.	Annual,
Reduction in the Vehicle operating cost		
Reduction in the average journey/ trip time		
Percentage of project satisfactorily completed		
OUTPUTS		
Percentage of the Primary Road Network Rehabilitated	Semi annual progress reports,submitted on 12/31 of each year,	Annual,
Engineering and Supervision consultant hired		
Project Execution Unit Established		
Audit and Evaluation completed annually		
Feasibility Study for Southern link Road completed with designs and tender documents.		

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing Instruments

- 2.1 The Bank's financing will be provided as an investment Loan for multiple works. The Loan will finance the total cost of the project from the Bank's ordinary capital resources. The loan will be for US\$50 million with an amortization and grace period of 25 and 5 years respectively. The expected disbursement period is for 5 years. The following disbursement table shows the tentative disbursement schedule.

Source	Tentative disbursements (in millions of dollars)					
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total	6.49	17.17	13.43	6.37	6.54	50

B. Environmental and Social Risks and Mitigation Measures

- 2.2 The Program net environmental and social impacts are likely to be positive for residents and businesses. No major negative impacts are expected since works will include mainly maintenance works; minor negative impacts are likely to be restricted to the immediate area of influence of the roads and limited to construction phase. The Program will have positive socio-environmental impacts as: i) improvement of the access to markets and social services by reducing travel time and transport costs; ii) reduction of the potential negative impact of local and sub-regional flooding to agricultural properties and rural areas by improving road traffic and safety conditions and enhancing storm water management; and iii) increased safety for pedestrians, road users, and a reduction in the number, occurrence, and severity of accidents.
- 2.3 Given the characteristics of the proposed civil works, as well as the fact that they will take place within the existing right-of-way and will not affect the resident population, the potential negative impacts will be: i) traffic congestion, creation of hazardous driving conditions and increase of the risk of accidents; ii) soil erosion with possible sedimentation of nearby water bodies, resulting from earth movement from excavation and construction waste; iii) soil and water contamination due to waste and effluents coming from work areas or equipment yards; iv) generation of dust, noise and gases by the operation of construction activity, equipment and vehicles; v) risk of accidents for workers or road users around construction sites; and vi) accidental rupture of utility pipes and lines (electricity, telephone, and water), including temporary interruption of services during the excavation and removal of pavement.
- 2.4 Impact Mitigation. The Program potential negative impacts will be avoided or attenuated through efficient application of an Environmental and Social Management Plan (ESMP) that was prepared during the Program design and

evaluation stage, based on NWA's Environmental Procedures - EP (April 2006)⁴ and Bank Policies. The ESMP contains: NWA's environmental policy and strategies; good practices and measures; roles and responsibilities; and environmental specification for civil works. The ESMP will be part of the civil works bidding documents.

- 2.5 In Jamaica, the National Environment and Planning Agency (NEPA), a regulatory agency part of the Office of the Prime Minister, is responsible for promoting the effective management, conservation and protection of the natural environment. The NEPA is also responsible for issuing an environmental permit for any green field project and environmental licenses for discharging of any trade effluent or other pollution matter to air, ground or water that can result from civil works. In the transport sector, the NWA has an Environmental Unit which is responsible for the road sector environmental management.
- 2.6 **Supervision and Monitoring:** Supervision, monitoring and enforcement of the ESMP will involve the participation of the NWA/EU's environmental engineer, the supervision firm, the contractor and the NEPA. The contractor should prepare specific Environmental and Social Management Implementation Plan (ESMIP) for each project using the ESMP as guidelines. The supervision firms will provide environmental engineer to oversee contractors' compliance with the ESMIP, provide training to NWA/EU and Contractors' staff and prepare monthly reports and any other reports prepared in relation to environmental, including emergencies that may occur (e.g. spills of hazardous substances). These environmental reports should be presented to NWA/EU, NEPA and the Bank. NEPA will provide independent supervision over environment and social aspects of the program implementation by periodically reviewing construction activities.
- 2.7 **Training:** The Environmental Consultant assigned to the PEU will provide environmental training as agreed in the Annual work plans to the following groups (i) NWA/EU Environmental Engineer and senior staff: training on basic environmental management procedures; and (ii) Construction Contractors' personnel will be trained on: environmental management, environmental emergency response, materials handling, waste material management and application of environmental and social management specifications. The above training will be included in the supervision firms' budgets.

⁴ The NWA's Environmental Procedures (EP) for infrastructure civil works include good management practices, environmental mitigation measures and environmental licensing requirements for the implementation and operation of construction camps; storage facilities; asphalt, concrete and crushing plants; borrow areas and quarries. Furthermore, the EP describe the actions to be undertaken to site restoration; erosion control and storm-water management; water pollution control; waterways, riverbanks and floodplains protection; dust, noise and vibrations control; waste management; vegetation and fauna protection, community relations; healthy and safety; etc.

C. Fiduciary Risk

- 2.8 **Auditors:** NWA as an executing agency has extensive experience working with the Bank with robust procurement and internal procedures. One of the lessons learned from the execution of the active portfolio however is that robust accounting systems are yet to be implemented within the proposed Executing agency. To mitigate the associated risk the Bank will require that the Executing Agency has and maintains adequate accounting controls and records acceptable to the Bank which must be submitted to the Bank as a consolidated financial report of the Program at the end of each fiscal year. This information will serve as the basis for the annual audit for the use of the Bank's funds. Given the importance of this task, the Executing Agency must ensure that staff with accounting and/or audit experience is retained.

D. Other Key Issues and Risks

- 2.9 **Macro-economic assessment:** Jamaica is among the largest economies in the Caribbean region, measured by a nominal GDP of USD10.7 billion. The island faces a persistent restraint on real growth however. During the past fifteen years, Jamaica's GDP has not been able to grow faster than 2.4%, while its regional peers grew at an average of 3.8 % during the same period. In fiscal year 2007/08 economic growth stood at a level of 1.2% but according to the IMF, it is likely to recover in 2008/09. Public debt peaked at 143.9% of GDP in March 2003 and has since declined to 132.4% by March 2007. This improvement stemmed from exchange rate effects, an acceleration of economic growth, higher primary surpluses and reduced fiscal deficits since 2003. The fiscal deficit has declined from 7.6% of GDP in 2002/03 to 3.3% in 2005/06. However, in 2006/07 the fiscal deficit widened to 6.6% of GDP, due both to revenue weakness and an overrun in current expenditures. Interest payments on the debt represent approximately 13% of GDP and 25% of the Government's budget in fiscal year 2007/08.
- 2.10 Macro economic imbalances are typical to the Jamaican economy. The fiscal deficit reached up to 5.8% of GDP in 2007/08 and inflation, mainly driven by increased food and oil prices accelerated to 18.1% by the end of fiscal year 2007/08. These imbalances are also reflected in the current account deficits that increased to 15.4% of GDP in 2007/08. Under pressure of these growing deficits, Jamaica's net international reserves have declined significantly. This trend is likely to be pursued in 2008/09 given the continuation of rising food and oil prices. GoJ has applied tight fiscal and monetary policies to address the imbalances in the economy and successfully achieved primary fiscal surpluses that hovered between 8 and 11% of GDP during the last three years. Although these efforts were not enough to tame inflation, they did result in a reduction of Jamaica's high public debt that stood at 128% of GDP in 2007/08.
- 2.11 **Debt sustainability:** The current Independent Macroeconomic Assessment (January 2008) indicates that under current macroeconomic conditions, the primary surplus required to stabilize the debt-to-GDP ratio is 4% of GDP. To reduce the debt-to GDP ratio to 40% (a threshold suggested by IMF research), the

primary surplus would need to be 7.44% of GDP for 20 years. It should be noted that for the last eight years Jamaica has run primary surpluses in excess of this amount. Stress tests indicate that the debt situation is robust to most foreseeable shocks when taken individually and the debt-to-GDP ratio would continue to decline over the medium term. However, if the economy were to be hit by a combined exchange rate, interest rate and growth shock, the debt-to-GDP ratio would rise. This underlines Jamaica's vulnerability to external shocks and the macroeconomic imperative of a significant reduction in the debt ratio.

- 2.12 **Long-term growth:** Between 1970 and 2005 the economy grew by an annual average of 0.9% and per capita income fell by a cumulative 5% in real terms. Between 2000 and 2005, investment averaged 30% of GDP, but economic growth averaged 1.5% per annum. Studies sponsored by the Bank have attributed the reasons to distortion in the allocation of resources, especially that caused by the tax system. A recent IMF study also concluded that growth had been reduced by the allocation of investment to less productive areas but attributed this to the high level of public debt and associated macroeconomic uncertainty. Faster, broader and sustained economic growth will be critical for raising the standard of living and further reducing poverty. Acceleration of growth depends on private sector development, which in turn requires a supportive macroeconomic context, a sound incentive framework and a facilitative business environment.
- 2.13 **Structural restrictions:** Several recent studies have described the problems that hinder competitiveness and growth in Jamaica. According to the Global Competitiveness Report for 2006-2007, the inadequate supply of infrastructure is among the factors that limit business' competitiveness. In addition, the Bank-sponsored Private Sector Assessment identified the inadequate infrastructure as one of the factors that hinder private sector development in Jamaica.
- 2.14 **Sustainability** Once the road asset is rehabilitated there is a risk that it would revert to a state of disrepair before the full useful life of the asset is realized due to a lack of adequate funding of maintenance activities. In order to mitigate this risk as part of donor coordination the 9th EDF will support a consultancy to assist GoJ find alternative modalities of providing more resources to the RMF. While the inclusion of the design build modality for the replacement of the Hope River Bridge affords more timely replacement of the structure this modality requires more supervision to ensure that the interest of GoJ is always optimized. To protect the interest of the GoJ the supervisory consultants would be engaged early in the process starting with the bidding documents and continue during the design and construction phase effecting tight supervision and environmental due diligence.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary Implementation Arrangements

- 3.1 The Borrower will be the Government of Jamaica. The executing agency will be the Ministry of Transport and Works (MTW) through the National Works Agency

(NWA). The NWA is the implementation arm of the MTW who has a wealth of experience and success in executing Bank financed projects namely the NRCIP, NCHIP and the Immediate Response facility. NWA reports to the Minister of Transport and Works through its Permanent Secretary. Therefore, the PEU of this operation will be rationalized with the Project Execution Units implementing the Immediate Response facility Loan 1959/OC-JA, will share resources where possible and will be responsible for the fulfillment of technical, administrative and financial procedures related to the execution of the Project, as well as the planning, monitoring, supervision and evaluation of the Project. This PEU will be constituted, by at least a Project Manager, and a Project Accountant and should be staffed by, at least, the following other senior officers i) an Environmental expert and ii) a Monitoring and Evaluation expert. The NWA will be in charge of monitoring and leading the execution of the Program. The following will be the condition prior to first disbursement (i) hiring/appointing a project manager, environmental expert and a certified accountant or similar combination of qualifications and experience pursuant to terms of reference previously approved by the Bank.

- 3.2 The PEU will be responsible for coordinating the technical and environmental supervision and quality control of works performed under the Program, using outside consultants engaged with terms of reference agreed with the Bank. Program supervision consultants will be required to prepare standard designs for simple works and final designs for complex works and for the replacement of Hope River Bridge, which will be constructed on contractual terms of design and build. Supervision consultants will also assist with the call and evaluation of bids and establish appropriate inspection and quality control and quality assurance procedures for implementation and the supervision of all contractors. They will also review technical documentation upon commencing their activities and at regular intervals throughout the contract performance period ensure, among other things, the adequacy of the programming and sequence of Program work such as the geotechnical and subsurface investigations, drainage, environmental specifications and mitigation measures, and worker safety recommendations and confirm that contractor qualifications and equipment capacity satisfy design requirements. They will also prepare final detailed drawings as built for all work performed upon completion of each given project.
- 3.3 The Executing Agency will have the following responsibilities regarding program implementation (i) conduct, control and register all administrative and accounting procedures needed; (ii) coordinate the bidding process according to the Bank's and GOJ rules; (iii) monitor the rehabilitation works and construction contracts through consulting firms specifically hired to that effect; (iv) maintain adequate accounting and financial controls as well as appropriate support documentation filing systems for verification by the Bank of ex-post reviews of procurement processes and by the external auditing firm (v) prepare and submit to the Bank disbursement request and corresponding justification of expenses (vi) prepare and submit to the Bank semiannual reports on the revolving fund program execution including annual updates of the Annual Plan of Operations, audited financial

reports and other financial reports as required by the Bank; (vii) record and control the results of the Program through agreed indicators and (viii) address and resolve contractor claims and address related contract adjustments. In addition, the Executing Agency will maintain separate files for the operations of the Program and allow for financial and accounting monitoring for the Bank's resources, in accordance with Bank requirements.

- 3.4 **Procurement.** Procurement of contracts to be financed with the resources of the financing will be conducted in accordance with the Policies for the Procurement of Works and Goods Financed by the Inter-American Development Bank (GN-2349-7); and the Policies for the Selection and Contracting of Consultant Financed by the Inter American Development Bank (GN-2350-7) both of July 2006. In response to GoJ's request, procurement of this project will be reviewed on an ex-ante basis.

- 3.5 Reimbursement of expenditures: Resources of Bank financing up to US\$7 million may be used to reimburse to the Borrower expenditures incurred by the Executing Agency before the date of approval of this operation and after August 28th, 2008 the date on which Tropical Gustav struck Jamaica. The Bank will recognize expenditures related to (i) removal of debris from roads; (ii) clearing of road blockages and road slips caused by heavy rains; (iii) clearing of blocked drains; (iv) structural work related to drainage systems along the roadway; (v) road repairs including deep patching, milling, sealing cracks, repairs to longitudinal drains, road markings and median restoration provided that such expenditures have been incurred by the Executing Agency in a manner that is consistent with this project, the terms and conditions of the loan contract as well as with Bank policies and procedures.

B. Summary of Arrangements for Monitoring Results

- 3.6 Monitoring and evaluation strategy will include the following: (a) annual audited financial statements; (b) annual plan of operations; (c) semiannual progress reports; (d) civil works monthly progress reports; (e) mid-term reviews and (f) Project completion reports.

C. Significant Design Activities Post Approval

- 3.7 **Future Activities to Complete Designs.** The preparation of detailed technical designs needed for tendering the works will be financed through the project. The designs will entail the category of works related to bridges restoration, river training, embankment stabilization and sea defense works as well as improvement of geometrical and structural characteristics of the road. Prior to tendering the civil works, the Executing Agency will submit to the Bank for its no objection the engineering studies, including technical designs and environmental studies.

JAMAICA
TRANSPORTATION REHABILITATION INFRASTRUCTURE PROGRAM
(JA-L 1016)
RESULTS MATRIX

PROJECT OBJECTIVE	Contribute to the reduction in transportation cost and travel time for road users by improving and maintaining the primary road network.
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OUTCOME INDICATORS	BASE LEVEL 2008	TARGET LEVEL 2013	COMMENTS
Percentage of accidents due to bad roads.	100(Base)	50	Determined by NWA based on the semiannual progress report and records of the police.
Vehicle operating cost	100(Base)	75	Determined by NWA based on the semiannual progress report.
Average journey/trip time	3hours	1.7 hours	Determined by NWA based on the semiannual progress report.
Percentage of project completed consistent with all technical and financial specifications	0	100	Determined by NWA and CJA staff based on loan contractual reports.

Component 1: Civil Works, Roads (US\$ 45.2 million).	Base	Year 1	Year 2	Year 3	Year 4	Target	Comments
Outputs							Compliance with these indicators will be determined based on NWA’s periodic reports and verification in the field by the Bank’s staff in Jamaica.
% of 5006km Primary Roads Rehabilitated	0	5	10	20	40	50	
Outcomes							
Reduced in the percentage of accidents due to bad roads.	100	95	90	80	60	50	
Vehicle operating cost	100	99	93	87	78	75	
Average journey/trip time	3 hrs	2.9	2.6	2.3	2	1.7 hrs	
Component 2: Project Implementation Support (US\$ 2.8 million)	Base	Year 1	Year 2	Year 3	Year 4	Target	Comments
Outputs							Compliance with these indicators will be determined based on NWA’s periodic reports and verification in the field by the Bank’s staff in Jamaica.
Engineering and Supervision consultant hired	0	1	1	1	1	1	
Project Execution Unit Established	0	1	1	1	1	1	
Project Coordinator and Project Accountant	0	1	1	1	1	1	
Audit and Evaluation completed annually	0	1	1	1	1	1	
Outcomes							
Percentage of project satisfactorily completed.	0	10	30	60	95	100	
Component 3: Institutional Strengthening (US\$ 2.0 million)	Base	Year 1	Year 2	Year 3	Year 4	Target	Comments
Outputs							Determined by NWA based on semiannual progress reports.
Feasibility Study, final designs and tender documents completed for Southern Link Road							
Outcomes							
Investment opportunity for the construction of the Southern line Road		10	90	100			

JAMAICA
TRANSPORTATION INFRASTRUCTURE REHABILITATION PROGRAM (JA-L1016)

PROCUREMENT PLAN

DESCRIPTION OF THE CONTRACT AND ESTIMATED COST OF PROCUREMENT	PROCUREMENT METHOD	REVIEW (PRIOR OR POST)	SOURCE OF FINANCING AND PERCENTAGE		PRE- QUALIFICATION (YES/NO)	ESTIMATED DATES		Status (pending, in process, awarded, cancelled)	COMMENTS
			IDB %	Local %		PUBLICATION OF SPECIFIC PROCUREMENT NOTICE	PUBLICATION OF SPECIFIC PROCUREMENT NOTICE		
GOODS									
1. Office equipment and Supplies Estimated cost (US\$200,000)	NCB	Ex-post	100%	0%	No	4 th Qrt 2008	4 th Qrt 2008	n.a	
CONSULTING SERVICES									
2. Consultancy (Firm)1 Engineering and Environmental Design and Supervision Services for Rehabilitation Estimated cost (US\$1,500,000)	QCBS Int'l	Ex-ante	100%	0%	n.a.	4th Qrt 2008	1st Qrt. 2009	n.a.	1 single contract
3. Consultancy (Firm) 2 Feasibility Study Southern Highway Corridor. Estimated cost (US\$2,000,000)	QCBS Int'l	Ex-ante	100%	0%	n.a.	1stQrt 2009	1st Qrt 2009	n.a.	1 single contract
4. Consultancy (Individuals) 3 Individual consultants (project manager, environmental specialist and accountant) for technical assistances to support NWA. Estimated cost (US\$240,,000)	3 CVs	Ex-ante	100%	0%	n.a.	1 st Qrt 2009	3rd Qrt 2009	n.a.	3 contracts
5. Consultancy (/firm) Technical assistance to facilitate annual financial audits Estimated cost (US\$300,000)	QCBS Int'l	Ex-ante	100%	0%	n.a.	4th Qrt 2008	4th Qrt 2008	n.a.	1 contracts

JAMAICA - TRANSPORTATION INFRASTRUCTURE REHABILITATION PROGRAM (JA-L1016)

PROCUREMENT PLAN

Description of the Contract and Estimated Cost of Procurement	Procurement Method	Review (Prior or Post)	Source of Financing and Percentage		Pre- Qualification (Yes/No)	Estimated Dates		Status (pending, in process, awarded, cancelled)	Comments
			IDB %	Local %		Publication of Specific Procurement Notice	Publication of Specific Procurement Notice		
Civil Works ¹									
6. Road Rehabilitation Belvedere – Hallhead 6.64km Estimated Cost (US\$830,000)	NCB	Ex-ante	100%	0%	No	4th Qrt 2008	1 st Qrt 2009	n.a.	
7. Road Rehabilitation Hallhead – Morant River Bridge 1.2 km Estimated Cost (US\$150,000)	NCB	Ex-ante	100%	0%	No	4th Qrt 2008	1 st Qrt 2009	n.a.	
8. Bunding Belvedere – Hallhead 1km Estimated Cost (US\$385,714)	NCB	Ex-ante	100%	0%	No	4th Qrt 2008	1 st Qrt 2009	n.a.	
9. Bunding Church Corner Morant River Bridge Estimated Cost (US\$314,286)	NCB	Ex-ante	100%	0%	No	4th Qrt 2008	1 st Qrt 2009	n.a.	
10. Desilting and River Training 4 km Yallahs. Estimated Cost (US\$1,100,000)	NCB	Ex-ante	100%	0%	No	4th Qrt 2008	1 st Qrt 2009	n.a.	
11.Design and Build Replacement Hope River Bridge Estimated cost (US\$14,000,000)	LIB	Ex -ante	100%	0%	No	4th Qrt	1st Qrt 2009	n.a.	

ICB: International competitive bidding; LIB: limited international bidding; NCB: national competitive bidding; PC: price comparison; DC: direct contracting; FA: force account; PSA: Procurement through specialized agencies; PAs: Procurement agents; IA: Inspection agents; PLFI: Procurement in Loans to financial intermediaries; BOO/BOT/BOOT: Build, own, operate/build, operate, transfer/build, own, operate, transfer; PBP: Performance-based procurement; PLGB: Procurement under Loans guaranteed by the Bank; PCP: Community participation procurement; QCBS: Quality- and cost-based selection QBS: Quality-based selection FBS: Selection under a fixed budget; LCS: Least-cost selection; CQS: Selection based on the consultants' qualifications; SSS: Single-source selection.

¹ List of Civil Works projects in the aggregate amount of US\$2.78 million is an indicative sample of the first 18 months of works which already have engineering designs completed and are ready to tender.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/08

Jamaica. Loan ___/OC-JA to Jamaica
Transportation Infrastructure
Rehabilitation Program

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 Government of Jamaica, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a transportation infrastructure rehabilitation program. Such financing will be for an amount of up to US\$50,000,000 from the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

LEG/SGO/JA-1577193-08

JA-L1016