

**JAMAICA  
ROAD IMPROVEMENT PROGRAM  
JA-L1027**

**PROJECT PROFILE (PP)**

**I. BASIC DATA**

<b>Project name:</b>	Road Improvement Program		
<b>Project number:</b>	JA-L1027		
<b>Project team:</b>	Team Leader: Alejandro Taddia (INE/TSP). Members: Rosana Brandao (INE/TSP), Brian Mc Nish (TSP/CTT); Diego Buchara (LEG/SGO) and Caterina Vecco (INE/TSP).		
<b>Borrower:</b>	Government of Jamaica (GOJ)		
<b>Executing agency:</b>	Ministry of Works and Transport through the National Works Agency		
<b>Financing plan:</b>	IDB Ordinary Capital (OC):	US\$	15,000,000
	TCs (see annex V)	US\$	0
	Local:	US\$	0
	Total:	US\$	15,000,000
<b>Safeguards:</b>	Policies triggered: B.11		
	Classification: B		

**II. GENERAL JUSTIFICATION AND OBJECTIVES**

**A. JUSTIFICATION**

- 2.1 **Background:** Jamaica's dense network of roads supports the primary mode of transport and mobility that facilitates access to social and economic life for the island's 2.7 million inhabitants. The road network however, has devolved into a state of disrepair due to a lack of adequate maintenance, exacerbated by torrential rains, hurricanes and attendant floods that have resulted in severe cumulative damage and a reduction in safety to the users. The number of vehicle crashes between 2006 and 2008 increased 13%, as an evidence of the worsening of road safety conditions.
- 2.2 **Sector Knowledge:** Road transport is the most important land transportation mode evident from the fact that it accounted for 75% of the total national consumption of petroleum in 2004. Jamaica's extensive road network consists of 15,000km, is one of the densest in the world. The national road network (highways and main roads) accounts for 29% of the roads (5,006km), includes 1,561km of arterial roads, 3,445 km of secondary and tertiary roads and 800 bridges. Its maintenance demands resources in excess of the country's ability to adequately finance it.
- 2.3 The National works Agency (NWA) is responsible for construction, maintenance and management of the main road network and flood control systems for Jamaica and is the implementing arm of the Ministry of Transport and Works (MTW). The Road Safety Unit (RSU) is mandated to provide timely accident information used to guide the decision making process, allowing for implementation of appropriate remedial measures.

- 2.4 With complementary support from the IDB (National Road Service Improvement Program, LO 1363/OC-JA), amendments to the Road Traffic Act have been finalized and laid before Parliament. Implementation of the commercial vehicle safety and weight limit enforcement Program is under preparation. In addition, three studies were commissioned by the GOJ with the assistance of the European Commission (EC) which provide a comprehensive strategic framework for the continued development of the sector: 1) The National Transport Policy, 2) The National Road Policy, and 3) The Road Maintenance Master Plan. These legislative acts, together with the transportation policy documents define a framework which will comprehensively identify roads, in the period 2006-2016, which are in need of urgent periodic maintenance, and which will significantly complement and contribute to the long-term protection of the investments envisioned for this operation. In the last years, the Bank provided financial resources to address periodic and routine maintenance.
- 2.5 **Problem:** Current estimates of the condition of the main and parochial road network are that between 30% to 60% are in poor or very poor condition to the extent that the road network in part has been rendered unsafe and unreliable. Some roads are closed which result in long journey times and high transport costs, effectively limiting the mobility of the nation. The attendant dislocation and social difficulties manifest in traffic congestion, difficulty for children to reach to school, difficulty accessing other basic social services such as health, public administration and other economic spaces such as markets and jobs. This situation threatens the long-term developmental objective of the GOJ which is based on a safe and reliable road network to facilitate the movement of goods and services and create conditions which engender investments and facilitate private sector productivity.
- 2.6 There is still limited capacity within the public sector related to govern road infrastructure, manage public resources, and enforce transportation regulations. The flow of funds of the Road Maintenance Fund, while recently increased, it has been traditionally insufficient, and available amounts 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 road network needs to be rationalized in keeping with limited resources for maintenance, population density, national physical and spatial development planning, and centers of industry and work.
- 2.7 **Government Strategy:** The proposed project is consistent with the government's strategy of market liberalization with the adoption of an export-led growth model. Attempts are therefore being made to create an environment conducive to attracting and increasing investment, to foster private sector growth and increase levels of output. In order to achieve sustainability of high growth through investment promotion, efforts are being aimed at promoting greater private sector yields and efficiency by upgrading, and maintaining the social and physical infrastructure, in particular the island's road network, as well as improving road safety.
- 2.8 Over the long term, the GOJ is pursuing a policy to rationalize the existing road network so that maintenance could be prioritized based on economic and social criteria, including consideration of the relative costs and benefits of primary, secondary and tertiary road networks. The GOJ is also considering establishing a

Roads Authority to: i) rationalize responsibility for construction and maintenance for main and parochial roads as well as major drains and gullies, ii) maintain and increase the safety of the road network, and iii) secure a sustainable means of funding for road maintenance expenditures. The GOJ is moving from works being executed by NWA towards the implementation of performance-based routine maintenance contracts.

- 2.9 **Bank's Strategy:** The proposed program is consistent with the Bank's Country Strategy that sets out three principal areas of focus: i) private sector development, ii) getting value for money, and iii) reducing vulnerability to natural disasters. Impaired and unsafe 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 maintenance and improvement of critical areas in terms of road safety will serve as a complementary input to enhancing the business climate and towards private sector development and will directly respond to the identified strategy of assisting with rehabilitation and reconstruction activities as required as well as align with the Bank's third strategic pillar by reducing Jamaica's vulnerability to natural disasters, through prevention and mitigation activities.
- 2.10 **Solution:** The proposed Program will finance the design and early implementation of performance-based maintenance contracts along prioritized corridors of the main road network that will test this new approach and allow for improving the documentation and processes, the improvement of road safety conditions on critical sections and segments, and the institutional strengthening of the RSU. These activities will support GOJ's competitiveness and economic development goals through restoring mobility, safety and reliability to the national road network. This operation builds upon the efforts undertaken by prior loans supporting the institutionalization of improved, modernized and sustainable road maintenance. The financing of routine maintenance is fully sustainable with the use of the Road Fund; once the resources of the financing have been used, the continuation of the activities will be fully financed by the fund.
- 2.11 The expected components of the Program are: **Component 1: Performance-Based Road Maintenance (US\$7.5 million).** This component will finance the routine maintenance works on roads (corridors and/or networks) to be selected from those prioritized by the GOJ that are consistent with a set of eligibility criteria. The prioritization of corridors and the set of criteria will be developed during program preparation. These contracts will include a hybrid of performance-based requirements and unit price works for roadside and road surface activities respectively. These works would include pavement and shoulder patching, removal of debris, maintenance of drainage structures, repair and replacement of traffic signs and guardrails. A PRODEV Technical Cooperation under preparation (JA-T1047) will support the execution of this project by financing the technical and institutional activities needed to design and put in place the performance-based contracts, and the required monitoring and evaluation structures within the MWT. **Component 2: Road Safety Improvement (US\$7.0 million)** This component will finance the implementation of civil works to improve road corridors to be selected from those prioritized by the GOJ that are consistent with a set of eligibility criteria. These works

would include improvement of roads, bridges and culverts, construction of shoulders in interurban segments, and sidewalks and other safety related works in urban areas. **Component 3: Institutional Strengthening of the RSU (US\$0.5 million).** This component will provide financing to maintain an automated traffic crash database, develop the Safety Performance Functions for all the main road sections, assist in the evaluation of the Road Safety Policy and road safety campaigns, develop measures for truck safety and training courses in crash energy analysis, biomechanics, commercial motor vehicle reconstruction and human factors, among others.

- 2.12 **Coordination with other MDB's.** The Bank is coordinating its assistance efforts in road repair and rehabilitation with other agencies such as the World Bank (WB) and the Caribbean Development Bank (CDB). The European Union (EU) provided the roadmap for interventions and investments and the basis for coordination in the sector, as well as budgetary assistance for road periodic maintenance. Kuwait and OPEC have provided resources for rehabilitation of rural and urban roads. The Planning Institute of Jamaica (PIOJ) has been the pivotal cross coordinator of the international financing, reflecting the GOJ's commitment to the sector and its coordinated strategy of donors' participation in the road sector.

### III. TECHNICAL ISSUES

- 3.1 **Institutional Capacity.** The NWA is currently in charge of the implementation of one operation from the Bank (LO-2026/OC-JA). NWA will have sufficient capacity to implement this proposed program, and keep with the activities on schedule. In addition, the institutional strengthening component will address critical areas to allow for a timely execution of the program.
- 3.2 **Studies:** Other studies to be conducted during project preparation will include: 1. Analyses of the existing maintenance management system and the maintenance fund, assessing the actual financial procedures and annual and month dollar amounts given by the RMF, and 2. Identification of areas for improvement, development of an action plan with activities to address them and sources of funding.
- 3.3 **Monitoring and Evaluation:** A comprehensive monitoring and evaluation system will be designed into the program to continually assess and refine the program's impact. The expected outcomes of the project would be: i) reduction in vehicle travel times on the roads to be improved, ii) reduction in the proportion of the road network in good/fair conditions, and iii) more efficient and effective road management by NWA. The key outputs of the project would be: a) kilometers of roads rehabilitated and under a performance-based maintenance program, b) kilometers of roads improved in terms of road safety, and c) capacity building activities in the MWT.

### III. SAFEGUARDS AND FIDUCIARY SCREENING

- 4.1 **Auditors:** The Executing Agency will be required to establish and maintain adequate accounting controls and records and they must submit to the Bank 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 of 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.

- 4.2 Environment. The Project will have net positive environmental impacts and social effects for residents and businesses in the project area and the country as a whole. Negative impacts are those related to the rehabilitation works, which will be temporary and localized to those portions of the roadway under rehabilitation at a particular time. The proposed works, similar in scope to those financed by a recently approved loan (JA-L1016), are small to medium in magnitude, will take place within the existing right-of-way corridors distributed across consolidated rural, urban and semi-urban areas and are not anticipated to generate permanent, widespread or irreversible significant negative environmental or social impacts. In general, the anticipated negative impacts of the Project can be characterized as easily identifiable; minor to moderate in magnitude; temporary in duration; spatially restricted; easily preventable or controllable with widely available, technically simple and cost-effective mitigation techniques; and reversible in the sense that an affected area can return to its preexisting condition after an impact occurs. For the road safety works, there are no expectations for protected areas or population affectation; nevertheless, in case of an unexpected affectation of population that implies relocation, the OP-710 Bank's Relocation Policy will be applied. All projects in Jamaica need some type of environmental analysis following applicable NEPA guidelines. To ensure the inclusion of all appropriate mitigation measures, NWA must coordinate with NEPA prior to the execution of eligible work. NWA has ample experience in contracting works, and performing the environmental supervision and enforcement, in an effective and efficient manner in preventing and mitigating environmental impacts.
- 4.3 The project team proposes a "B" classification for this operation. The Socio-Environmental Management actions and measures to ensure the environmental and social sustainability of the Project are as follows: a) development of an environmental and social management plan (ESMP) including preventive and mitigating measures, monitoring and supervision programs, as well as General and Particular Environmental Specifications. This ESMP shall be based upon the plan developed during the preparation of JA-L1026 (Transport Infrastructure Rehabilitation Program), recently approved by the Bank, considering the similarities in the type, scope and impact of the works of both operations. The development and update of this ESMP shall be financed with loan resources; and b) inclusion of the ESMP as part of the bidding documents for maintenance works and road safety works as well as the engineering supervisory services, and the construction and supervisory contracts.

## **V. OTHER ISSUES**

- 5.1 Other issues which may impact on the scope, quality and timing of the preparation of the project relates to the selection of roads that will receive rehabilitation and the arrangements of the maintenance activities. To address these issues, the operation will develop a set of criteria for prioritizing roadwork based on road conditions, and analyze the relationship with other operations under execution.

## **VI. RESOURCES AND TIMETABLE**

- 6.1 The tentative date for submission of the operation to the Board is the fourth quarter of 2009. During the orientation mission (September 2009), the project team will diagnose the engineering, environmental and institutional readiness of the operation.

*Apologies*  
*Annex Confidential*

**JAMAICA  
ROAD IMPROVEMENT PROGRAM  
JA-L1027**

**Safeguard Screening Form**

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	Transportation
	<b>Type of Operation</b>	Investment Loan
	<b>Country</b>	Jamaica
	<b>Project Status</b>	
	<b>Investment Checklist</b>	Infrastructure Road and Rail
	<b>Team Leader</b>	Alejandro Taddia ( <a href="mailto:alejandrot@iadb.org">alejandrot@iadb.org</a> )
	<b>Project Title</b>	Road Improvement Program
	<b>Project Number</b>	JA-L1027
	<b>Safeguard Specialist(s)</b>	
	<b>Assessment Date</b>	2009-08-10
	<b>Additional Comments</b>	

<b>PROJECT CLASSIFICATION SUMMARY</b>	<b>Project Category:</b> B	<b>Override Rating:</b>	<b>Override Justification:</b>
	<b>Conditions/ Recommendations</b>		<b>Comments:</b>
		<p>Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements).</p> <p>The Project Team must send to ESR the PP or PCD (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.</p> <p>These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary.</p>	

**JAMAICA  
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JA-L1027**

<b>SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS</b>	<b>Identified Impacts/Risks</b>	<b>Potential Solutions</b>
	Generation of solid waste is moderate in volume and does not include hazardous materials.	<b>Solid Waste Management:</b> The client should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration.

<b>ASSESSOR DETAILS</b>	<b>Name of person who completed screening:</b>	
	<b>Title:</b>	
	<b>Date:</b>	2009-08-10



**JAMAICA  
ROAD IMPROVEMENT PROGRAM  
JA-L1027**

**Safeguard Policy Filter Report**

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	Transportation
	<b>Type of Operation</b>	Investment Loan
	<b>Investment Checklist</b>	Infrastructure Road and Rail
	<b>Team Leader</b>	Alejandro Taddia ( <a href="mailto:alejandrota@iadb.org">alejandrota@iadb.org</a> )
	<b>Project Title</b>	Road Improvement Project
	<b>Project Number</b>	JA-L1027
	<b>Safeguard Specialist(s)</b>	
	<b>Assessment Date</b>	2009-08-10
	<b>Additional Comments</b>	

<b>SAFEGUARD POLICY FILTER RESULTS</b>	<b>Type of Operation</b>	[Not Set]	
	<b>Safeguard Policy Items Identified (Yes)</b>	The Bank will make available to the public the relevant Project documents.	OP-102
		Potential to cause air, soil or water contamination (also see B.10).	(B.11)
	<b>Potential Safeguard Policy Items(?)</b>	No potential issues identified	
	<b>Recommended Action:</b>	Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PCD (or equivalent) and Safeguard Screening Form to ESR.	
	<b>Additional Comments:</b>		

<b>ASSESSOR DETAILS</b>	<b>Name of person who completed screening:</b>	
	<b>Title:</b>	
	<b>Date:</b>	2009-08-10

**JAMAICA  
ROAD IMPROVEMENT PROGRAM  
JA-L1027**

**Environmental and Social Strategy**

The National works Agency (NWA) has responsibility for construction, maintenance and management of the main road network and flood control systems for Jamaica and is the implementing arm of the Ministry of Transport and Works (MTW). It is Road Safety Unit (RSU) is mandated to provide timely accident information used to guide the decision making process, allowing for implementation of appropriate remedial measures.

The Program will be composed by the following components: **Component 1: Performance-Based Road Maintenance:** This component will finance the routine maintenance works on roads (corridors and/or networks) to be selected from those prioritized by the GOJ that are consistent with a set of eligibility criteria. These contracts will include a hybrid of performance-based requirements and unit price works for roadside and road surface activities respectively. These works would include pavement and shoulder patching, removal of debris, maintenance of drainage structures, repair and replacement of traffic signs and guardrails. The required studies and institutional strengthening activities for a timely and effective implementation of this component will be financed by means of a PRODEV technical cooperation (JA-T1047) currently being prepared that will support the execution of this project. **Component 2: Road Safety Improvement:** This component will finance the implementation of civil works to improve road corridors to be selected from those prioritized by the GOJ that are consistent with a set of eligibility criteria. These works would include improvement of roads, bridges and culverts, construction of shoulders in interurban segments, and sidewalks and other safety related works in urban areas. **Component 3: Institutional Strengthening of the RSU:** This component will provide financing to maintain an automated traffic crash database, develop the Safety Performance Functions for all the main road sections, assist in the evaluation of the Road Safety Policy and road safety campaigns, develop measures for truck safety and training courses in crush energy analysis, biomechanics, commercial motor vehicle reconstruction and human factors.

The Project will have net positive environmental impacts and social effects for residents and businesses in the benefited Program areas and the country as a whole. These activities will support growth and competitiveness goals and normalize economic development through restoring mobility, safety and reliability to the national road network. Also, the activities of institutional strengthening proposed will have very positive impacts on improving the RSU mandate.

The Bank is coordinating its assistance efforts with other agencies (see PP ¶ 2.15) and it will create a synergy to maximize the benefits of the Program.

Negative impacts are those related to the routine maintenance minor works, or safety improvements works, which will be temporary and localized to those portions of the roadway at any particular time.

### **Positive Environmental and Social Impacts**

The proposed road maintenance activities will not involve any significant changes to the traveled portion of the roads within the right-of-way. The component is not expected to result in increased traffic volumes, will not involve expropriation and/or direct impacts to properties along the route, nor is there any moderate or significant negative environmental impacts expected.

For the proposed road safety works, which would include improvement of roads, bridges and culverts, construction of shoulders in interurban segments, and sidewalks and other safety related works in urban areas, the greatest benefit will be the decrease of accidents and death of the road users and pedestrians in the urban areas, beside the economical benefits of it.

Overall, the Program will result in the following positive effects:

- increased safety for pedestrians with the provision of warning signs, protected sidewalks and paved shoulders, street lighting, pedestrian crosswalks and reduced speed zones, especially in built-up areas and in proximity to schools, hospitals and markets;
- increased safety for the traveling public in private and public vehicles and truck transport with the provision of chevrons and warning signs in areas with obstructed line-of-site and dangerous curves, controlled speed zones and reflectors embedded in the pavement at dangerous curves;
- reduced travel time and economic costs due from bad road conditions;
- more efficient movement of produce to market, and improved access to shop and markets;
- improved transport services to hospitals and schools, and improved response time for fire and police services;
- a reduction in the number and severity of vehicle-to-vehicle and vehicle-to-pedestrian accidents, with concomitant reductions in injuries and fatalities, health and police services costs, and reduced costs associated vehicle damage (from potholes and accidents);
- reduction in the per-mile costs of vehicle operation (fuel, lubricants, wear-and-tear); and
- reductions in emissions and local air pollution as traffic will move more smoothly with a decrease in stop-and-go traffic and congestion.

## **Negative Environmental and Social Impacts**

The anticipated negative impacts of the Program are related to the maintenance activities, and road safety activities and works and can be characterized as easily identifiable; minor in magnitude; temporary in duration; spatially restricted; easily preventable or controllable with widely available, technically simple and cost-effective mitigation techniques; and reversible in the sense that an affected area can return to a preexisting condition after an impact occurs. The environmental and social impacts that can be expected include:

- disruption of pedestrian movements and traffic flow at the site of road safety works or maintenance activities resulting in travel delays and increased risk of accidents;
- dust and noise to nearby residents, shops, schools, hospitals and churches;
- minor removal of secondary vegetation during the execution of road safety works;
- soil erosion and landscape degradation with possible sedimentation of nearby water bodies, resulting from possible minor earth movements from the road safety works;

Resettlements are not expected but in case it's necessary it will follow the OP-710 Bank's policy

These impacts will be largely mitigated through effective application of environmental management specifications to be developed as part of the environmental and social management plan (ESMP), including preventive and mitigating measures, monitoring and supervision programs, as well as General and Particular Environmental Specifications. This ESMP shall be based upon the plan developed during the preparation of JA-L 1026 (Transport Infrastructure Rehabilitation Program), recently approved by the Bank, considering the similarities in the type, scope and impact of the works of both operations. The development and update of this ESMP shall be financed with loan resources.

The ESMP will be included as part of the bidding documents for maintenance works and road safety works as well as the engineering supervisory services, and the construction and supervisory contracts.

**JAMAICA  
ROAD IMPROVEMENT PROGRAM  
(JA-L 1027)**

**Index for Completed and Proposed Sector Work**

<b>Issues</b>	<b>Description</b>	<b>Expected Dates</b>	<b>References &amp; hyper links to Technical files</b>
National Transport Policy	Diagnostic of the sector analyzing, air, sea, rail and road transportation and which also provides an elaboration of policy for the sector	Financed by the EU. Completed in 2004 and approved by Cabinet in 2005	
National Road Policy	Complementary study to the NTP, focusing specifically on the amplification of policy for road transportation.	Financed by the EU. Finalized in the second semester of 2005 and was subsequently approved by the Ministry of Transport and Works	
Road Maintenance Master Plan	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.	Financed by the EU.	
Technical options and design	Funded by the Bank (JA-T 1047)	12/31/09	
Analysis of project cost and economic viability	Funded by the Bank (GY 0056)	12/31/09	
Data collection and analysis for reporting on results	Project Team. Orientation Mission and Analysis Mission	3 <sup>rd</sup> Q 2009	
Institutional analysis/personnel, procedures other aspects of implementation capacity	Institutional capacity assessment: Proposal for a short and medium term program for institutional strengthening	9/15/09	
Social and environmental safeguards	See Annexes II and III	-	