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# **HIGHWAY 2000 PROJECT**

## **Preliminary Design Phase**

### **Illustrative Solution**

### **Operations and Management Plan**



*Presented to :*



**DEVELOPMENT BANK  
OF JAMAICA LIMITED**

*By :*



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# Development Bank of Jamaica Ltd

## HIGHWAY 2000 PROJECT Preliminary Design Phase

### Illustrative Solution-Operations and Management Plan

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## **APPENDIX A Special provisions**

# Illustrative O & M Solution

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## **1 GENERAL APPROACH**

A maintenance organization consisting of four Patrol Teams will be established under the direction of a Maintenance Manager. Each Patrol Team will include a Road Superintendent, an Assistant Superintendent and a minimum of 4 permanent staff who will conduct daily patrols and perform routine maintenance activities. The Patrol Teams will be dispatched from four Patrol Yards located near Spanish Town, Mandeville, Montego Bay and Ocho Rios respectively.

A number of local contractors will be retained to provide scheduled and emergency maintenance services related to specialty items.

Each Patrol Yard will be equipped with 3 light trucks, a 10 tonne dump truck, a rubber tired front-end loader/backhoe with trailer, 2 medium duty tractors with grass and brush cutting attachments, miscellaneous hand tools and equipment, a secure garage for storage of all equipment, an attached 40 m<sup>2</sup> air-conditioned office with water and sanitation facilities and an appropriately equipped shop area. Each Patrol Yard will maintain an inventory of advisory signs, flares, pylons and barriers for emergency response and temporary lane closures as required in the MTO Traffic Control Manual for Roadway Work Operations.

All vehicles or personnel will be equipped with communications devices.

## **2 HIGHWAY MARKETING AND COMMUNICATIONS**

A Marketing Manager will establish a marketing strategy in consultation with external consultants and Jamaican stakeholders to maximize the revenue potential of the highway.

A communications plan will be developed detailing procedures to be followed by staff related to incident management, temporary closures, construction and maintenance activities, extreme weather events. For example, during extreme weather conditions, road condition advisories will be broadcast at 4 hour intervals.

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## **3 TRAFFIC AND SAFETY MANAGEMENT**

A comprehensive safety plan will be developed that will include the adequate training of staff to ensure that the work site traffic controls as outlined in the Traffic Control Manual for Roadway Work Operations are followed in the day to day operation of the highway.

## **4 EMERGENCY RESPONSE AND INCIDENT MANAGEMENT**

Traffic control will be provided when necessary and when requested by the appropriate policing agency.

Contracts will be established with local tow truck operators for the rights to remove disabled vehicles from the highway.

A local contractor qualified in hazardous waste management and environmental remediation will be retained to provide emergency response to incidents involving hazardous materials within 4 hours of notification. All Patrol staff will be trained to identify situations that require specialist response and to implement appropriate precautionary measures.

All incidents will be recorded and reported to the Grantor on a monthly basis.

## **5 ENVIRONMENTAL MANAGEMENT**

All operational and maintenance activities will be carried out in conformance with the approved Environmental Management Plan.

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## **6 TOLL COLLECTION MANAGEMENT**

The toll collection and management system will suit the toll technology (details to be provided by Bidders).

## **7 POLICING AND ENFORCEMENT**

The services of the proposed Highway 2000 police force will be relied upon to enforce Jamaican traffic laws.

Vehicle weights will be monitored in conjunction with the selected tolling system. Toll supplements will be assessed for overweight vehicles. Collection of toll supplements will be enforced in accordance with Jamaican law.

## **8 DAILY PATROLS AND MONITORING**

A minimum of 2 daily patrols will be conducted (at 06:00 and at 14:00).

Automatic vehicle detectors will monitor traffic between all interchanges in both directions. Hourly updates of traffic will be posted on the Internet. Software will be provided to analyze data and alert the Operators of potential incidents.

## **9 MAINTENANCE MANAGEMENT**

A comprehensive maintenance management system will be implemented using industry standard computer hardware and software.

### **9.1 GENERAL MAINTENANCE**

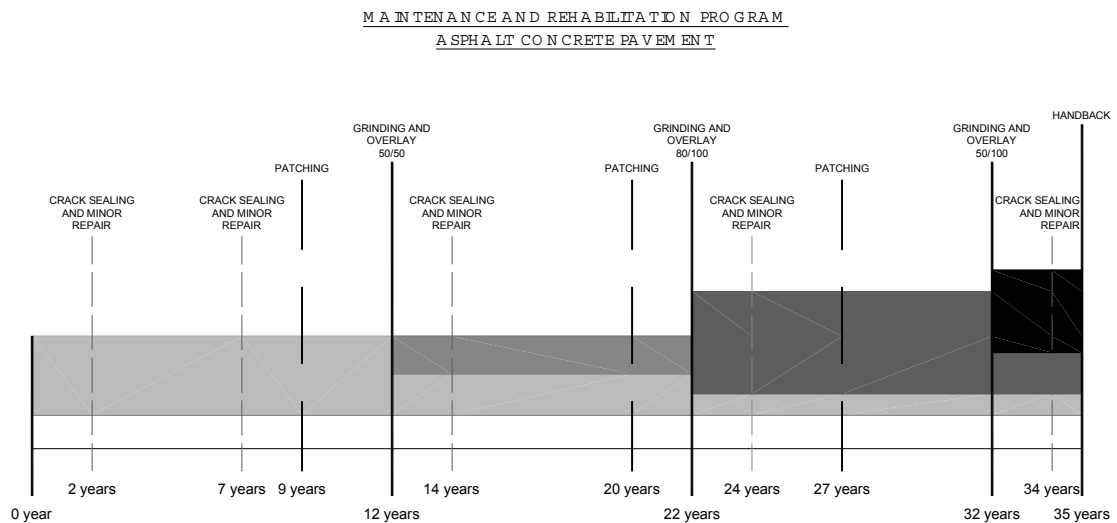
A work-order based system will be used to schedule and monitor routine maintenance activities in accordance with the applicable maintenance Special Provisions. (Refer to

# Illustrative O & M Solution

Appendix 'A' for sample Special Provisions provided by the Ontario Ministry of Transportation which indicate the intent of the routine maintenance activities.)

## 9.2 PAVEMENT MANAGEMENT

The following pavement rehabilitation and resurfacing schedule is proposed :



Bi-annual inspections will be conducted as set-out in the Core Requirements and reported in a pavement management system. Repairs and rehabilitation work will be scheduled as required.

## 9.3 BRIDGE MANAGEMENT

Inspections will be conducted as set-out in the Core Requirements and reported in a bridge management system. Repairs and rehabilitation work will be scheduled as required.

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## **10 MATERIALS INVENTORY MANAGEMENT**

A computer based inventory management system will be provided and operated from the central operations facility in Spanish Town. The system will establish inventory items and monitor stocks. Patrols will requisition inventory from the central operations facility. Inventory will be ordered at pre-set trigger points.

## **11 FLEET AND EQUIPMENT MANAGEMENT**

A computer based fleet and equipment management system will be provided and operated from the central operations facility in Spanish Town. The operations and maintenance history of each asset will be tracked.

## **12 FACILITIES MANAGEMENT**

A computer based facilities management system will be provided and operated from the central operations facility in Spanish Town. The facilities management system will track the operations and maintenance history of all assets not otherwise managed.

## **13 CAPITAL WORKS AND REHABILITATION**

Capital works including addition of lanes, upgrading of interchange capacity and safety improvements will be undertaken as required by the Core Requirements.

Rehabilitation of highway infrastructure and related works will be undertaken as required by the Core Requirements.

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**Appendix A    Special provisions**

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