

HIGHWAY REPAIR AT BOTANIC GARDENS BATHSHEBA, BARBADOS, WI

PAVEMENT REINFORCEMENT—ASPHALT OVERLAYS

Product: Road Mesh™

Problem

The Barbados Ministry of Transport Works were seeking a cost effective method of pavement rehabilitation. Pavement construction in the West Indies is constrained by the cost of importing bituminous products for asphalt pavements, and the availability of good quality local aggregate.

Foster Hall Road, leading to Andromeda Botanic Garden in Bathsheba, Barbados was nearing the end of its design life. The pavement was rutted, cracked and at the end of its fatigue life. It needed replacing.

Solution

Maccaferri and its distributor in Barbados, Da Costa Mannings, introduced the Barbados MOT to Road Mesh™.

Research and development prove that Road Mesh™ increases the design life of asphalt pavements by structurally reinforcing it, reducing rutting, shoving and reflective and fatigue cracking.

Reducing the maintenance commitment was important to the Barbados MOT due to the cost of importing bituminous materials.

An 1100yd (1km), 23ft (7m) wide section of the road was to be resurfaced using Road Mesh™. The installation and results were to be closely monitored.

The existing pavement surface was milled by 1.5" (3.8cm). Following this a 0.5" (1.3cm) scratch coat was placed and compacted.

13.1' (4m) wide rolls of Road Mesh™ were supplied to the project, which was then deployed into position and rolled into intimate contact with the pavement surface by a rubber tired roller.

Client:

BARBADOS MINISTRY OF TRANSPORT

Main contractor:

C.O. WILLIAMS LTD

Designer:

IMAD AL QADI CONSULTANT

Products used:

9,600 Yd² (8,000 M²) ROAD MESH™

Date of construction

OCTOBER 2004



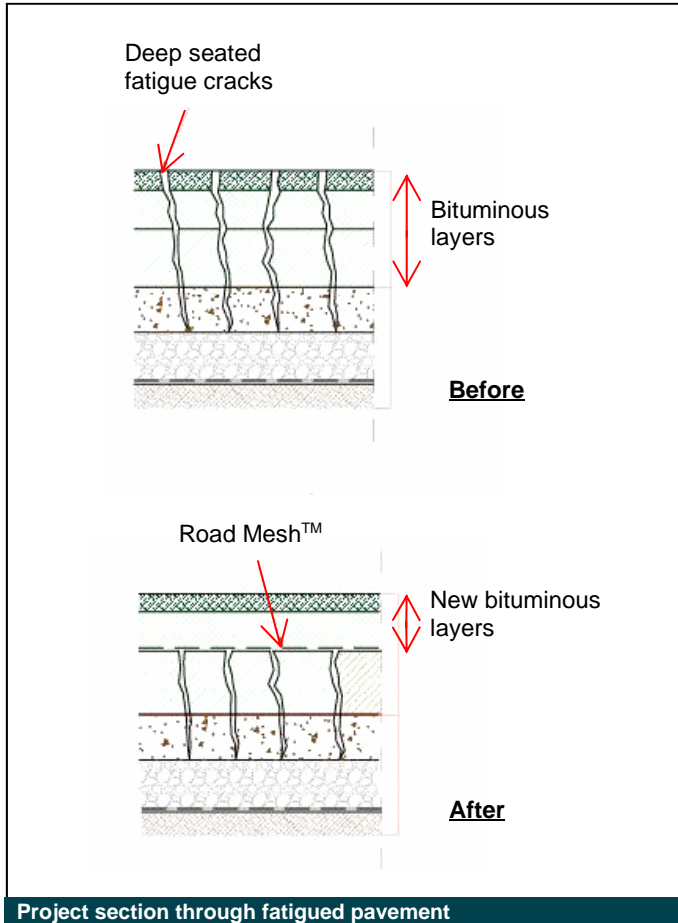
Milling existing pavement by 1.5"



Placing 0.5" 'scratch' coat



Deploying and rolling Road Mesh™ flat



The Road Mesh™ was secured using a 2.5" (63.5mm) long Hilti™ sleeved nail drilled into the scratch coat layer. The plastic sleeve provided a good grip within the fresh asphalt.

20 fixings were used in the first 6.5ft (2m) at the start of each roll of mesh. 4 fixings per 3.3ft (1m) were installed thereafter. The additional fixings are required at the start of the roll, as this is where the roll is at its most vulnerable to being lifted up by the paving machine during asphalt placement.

Following fixing, the road was then paved with a 2" (50mm) thick wearing course and then rolled.

The project was completed successfully, and the monitoring period is underway.

The Barbados Ministry of Transport can see great potential in Road Mesh™, as a way to reduce their maintenance commitment, and extend the fatigue life of their pavements.



Headquarters—East Coast

10303 Governor Lane Blvd, Williamsport, MD 21795
Tel: 301-223-6910 Fax: 301-223-6134

MACCAFERRI INC.

E.mail: hdqtrs@maccaferri-usa.com
Web site: www.maccaferri.com

West Coast

3650 Seaport Blvd, West Sacramento, CA 95691
Tel: 916-371-5805 Fax: 916-371-0764