

Transportation Management : Experiences of A Small Island State

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By

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Ministry of Public Works & Transport

- ◆ The national agency which oversees all modes and all aspects of land transport in Barbados.
- ◆ Covers both public and private transport, from policy and planning to engineering, regulation and management.

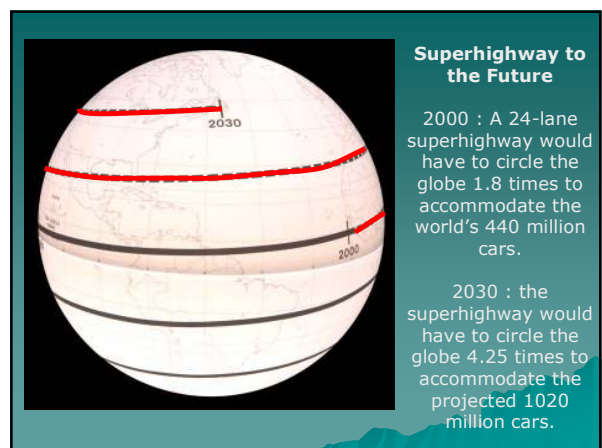
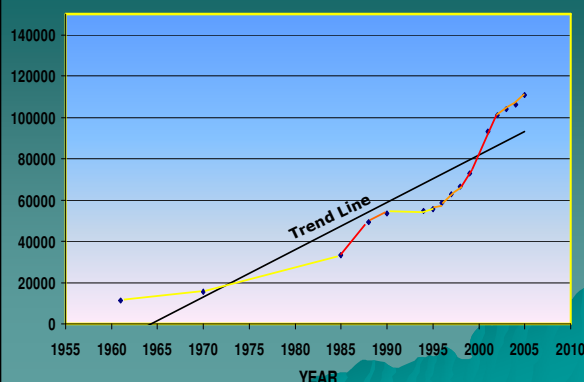
Barbados Transport Fact Sheet 2007

- ◆ 280,000 (est.) Population
- ◆ Land area 431 sq. Km (166 sq. miles)
- ◆ 1700 Km paved roads
- ◆ 120,000 registered vehicles
- ◆ Vehicle occupancy figure 1.7
- ◆ Transport Board ridership 19 million annually
- ◆ 8,700 reported traffic accidents, 22 fatalities annually

Challenges

- ◆ To keep our roads flowing smoothly with growing traffic demand.
- ◆ To provide safe, efficient and well-maintained transport facilities for ALL road users.
- ◆ To provide the above with limited financial and human resources.
- ◆ To apply our scarce land resource to the best use.
- ◆ Achieving balance between effective & efficient use of land space and meeting local and visitor transport needs.

FIGURE 1: VEHICLE REGISTRATION



Transport Goals

- ◆ Seamless travel by public transport can be facilitated by
 - integrating land use with transport planning and development;
 - integrating bus routes with the road network used by private vehicles (cars); and
 - employing innovations such as smartcard ticketing systems.
- ◆ Optimization of our road network system by
 - use of a traffic signal synchronization system.
 - incident and congestion management.

Integrated Control Of Networked Systems (ICONS)

- ◆ Barbados is land-scarce and hence the optimization of our road network system is vital.
- ◆ Advanced transport systems like traffic signal synchronization can maximize road capacity and improve flows.



Traffic Operations Centre, MPT

Traffic & Road Management

Covers the design, construction & management of roads, congestion management and traffic management to promote the free flow of traffic on roads.

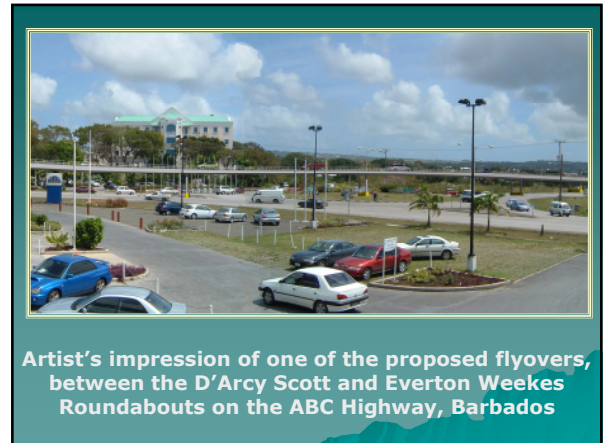
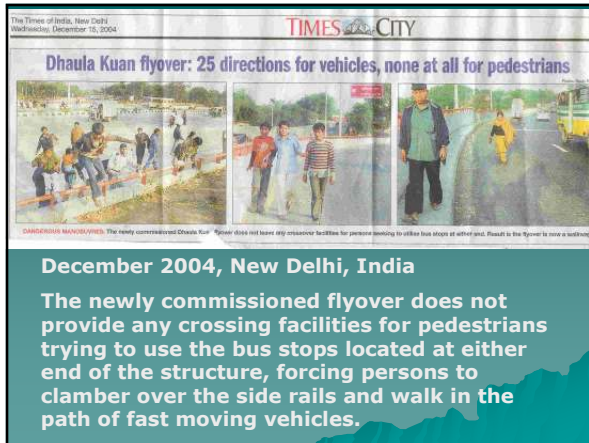
Traffic & Road Management

- ◆ Junction & Signal Design
- ◆ Road, Bridge, Tunnel Design
- ◆ Road Safety Engineering & Audits
- ◆ Traffic Surveys
- ◆ Traffic Simulation
- ◆ Incident Management
- ◆ Preventative Road Maintenance
- ◆ Road Works Coordination
- ◆ Demand Management Schemes
 - Vehicle Quota System
 - Car Park Management
 - Mode (Vehicle, Pedestrian) Management
- ◆ Congestion Pricing
 - Electronic Road Pricing
 - Tolls

Design (Traditional Vs. New)

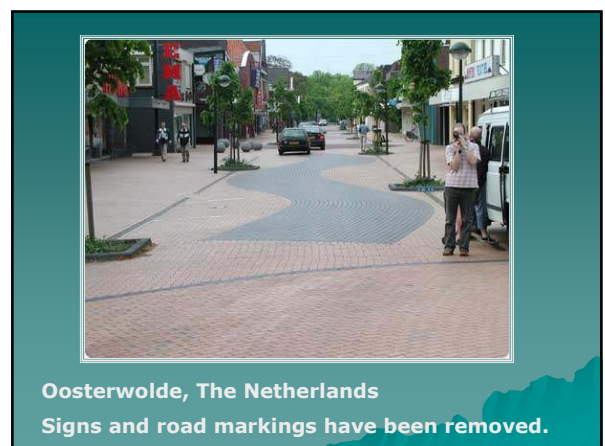
Traditional Thinking - The car represents personal freedom

- ◆ Driving and walking should not mix, segregation highly desirable.
- ◆ Cars were given extensive networks, while pedestrians were kept safely away in residential areas.
- ◆ Response to relieve congestion
 - build it bigger, wider, faster.



New Thinking - People are prisoners of their cars

- ◆ Be sensitive to the surrounding areas and promote shared-space designs wherever appropriate.
- ◆ The way a road is built affects more than the movement of vehicles.
- ◆ Hans Monderman Approach
 - Build roads that seem dangerous, and they'll be safer.
 - "Psychological traffic calming."
- ◆ Chaos = Cooperation





Kensington High Street, London

Wide pavements, a central refuge and the removal of street clutter have made walking much easier.



St. Lawrence Gap, Barbados

Road markings have been removed.



Colour and texture added to create a more social space.



Orchard Road, Singapore

Pavements are wide and tree lined making walking and shopping a pleasant experience.



Swan Street, Bridgetown Barbados

Possible Way Forward

- ◆ Connect secondary streets
- ◆ Add smaller centres of development
- ◆ Create a series of linked minivillages with narrow roads, rather than wide highways with strip malls.
- ◆ Consider design features such as
 - Instead of a raised curb, denote sidewalks by texture and colour.
 - Promote the idea of shared space by allowing cafés etc. to extend to the edge of the street.
 - Design lighting to illuminate both the carriageway and pedestrian areas.

A Land Transport Strategy

- ◆ Increasing modal choices e.g. providing an attractive public transport system; the cornerstone
- ◆ Improving traffic safety and circulation
- ◆ Improving the information conveyed to the road user to enable wiser choices
- ◆ Reducing city/town through-traffic volumes via the provision of increased bypass capability (e.g. ring roads)

Land Transport Strategy Continued...

- ◆ The full implementation of the central “Bridgetown Traffic Management Plan” including revised travel flow patterns and street closures (pedestrianization)
- ◆ Implementation of the on street parking plan to facilitate traffic flow and satisfy short-term (<2 hrs) parking needs

Land Transport Strategy Continued...

- ◆ Consider measures to restrict private car use ranging from increased fuel costs to parking restrictions to pedestrianization of key streets
- ◆ Land use controls/zoning (place transport hubs near home/work)
- ◆ Consider dedicated school bus services

THANK YOU