



Priority Busway Network for the Carolina Corridor

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RESEARCH PURPOSE: To develop a conceptual design for a network of priority treatments such as bus lanes and priority at traffic signals in the Carolina Corridor for bus and públicos . This network can act as feeder for Tren Urbano, as well as develop the transit market for the future Tren Urbano extensions

RESEARCH OBJECTIVES

- ★ **To review existing Bus Rapid Transit projects and assess their applicability to San Juan**
- ★ **To perform alternative conceptual designs of priority facilities and treatments in the Carolina and Trujillo Alto corridors**
- ★ **To investigate the feasibility of implementing transit-priority measures and evaluate their impact on transit service quality and traffic**

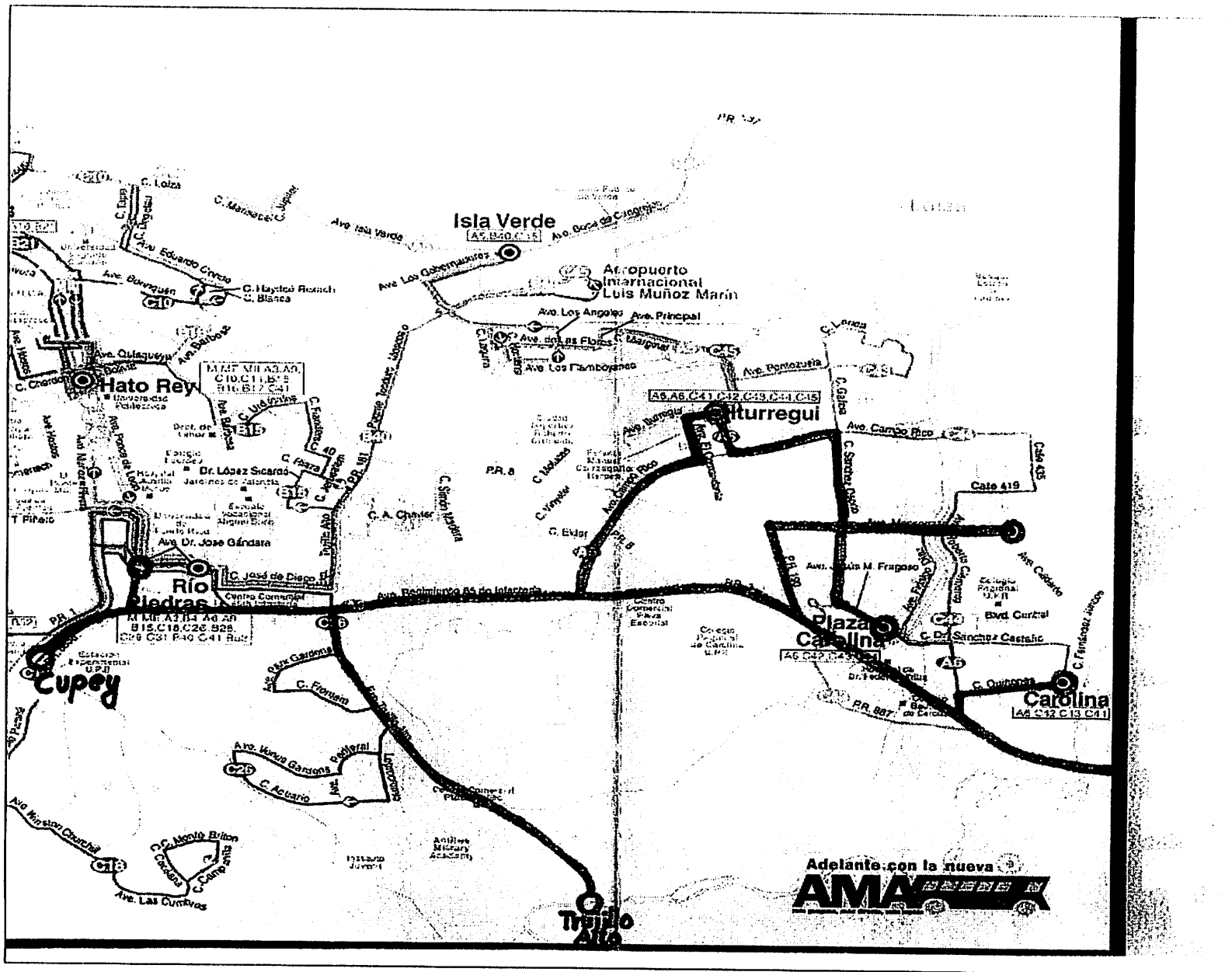
Some measures could be:

- ➔ ***Roadway geometry:* Exclusive bus lanes, busways or queue jumpers**
- ➔ ***Signal priority:* extended green light and other tactics for buses approaching intersections**
- ➔ ***Improvements to local streets to increase traffic flow***
- ➔ ***Utilization of higher capacity and performance buses***
- ➔ ***Facilitate bus access to Tren Urbano transfer stations***

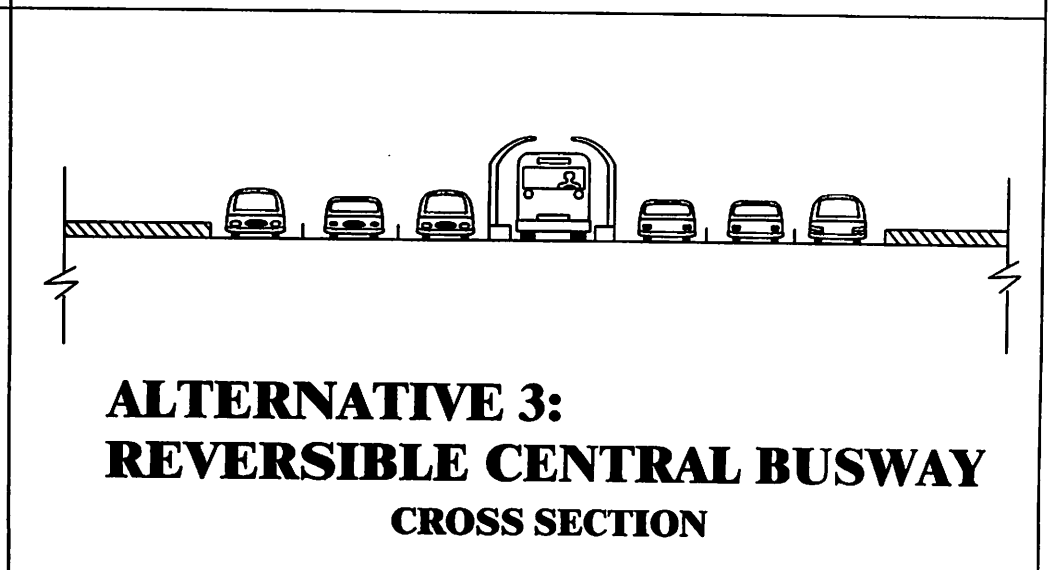
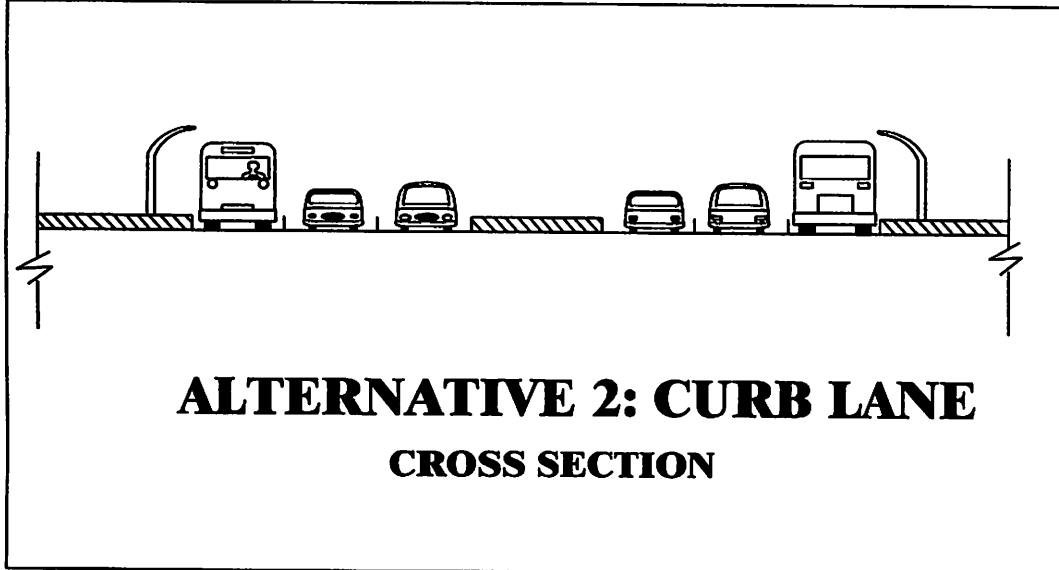
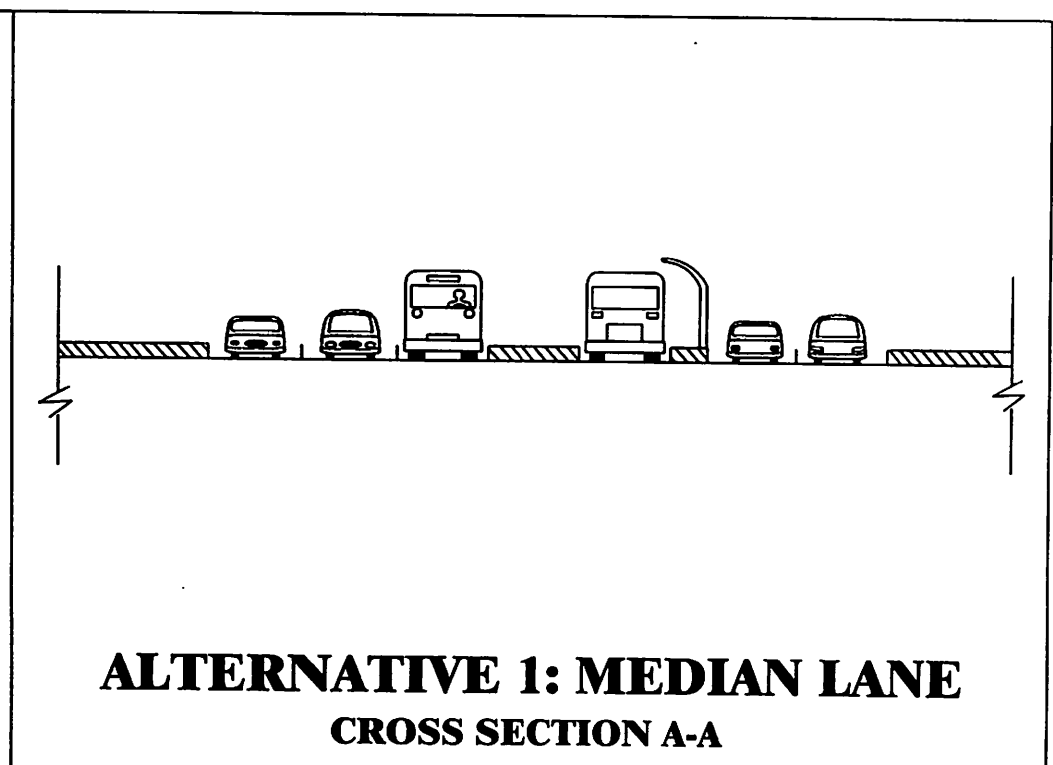
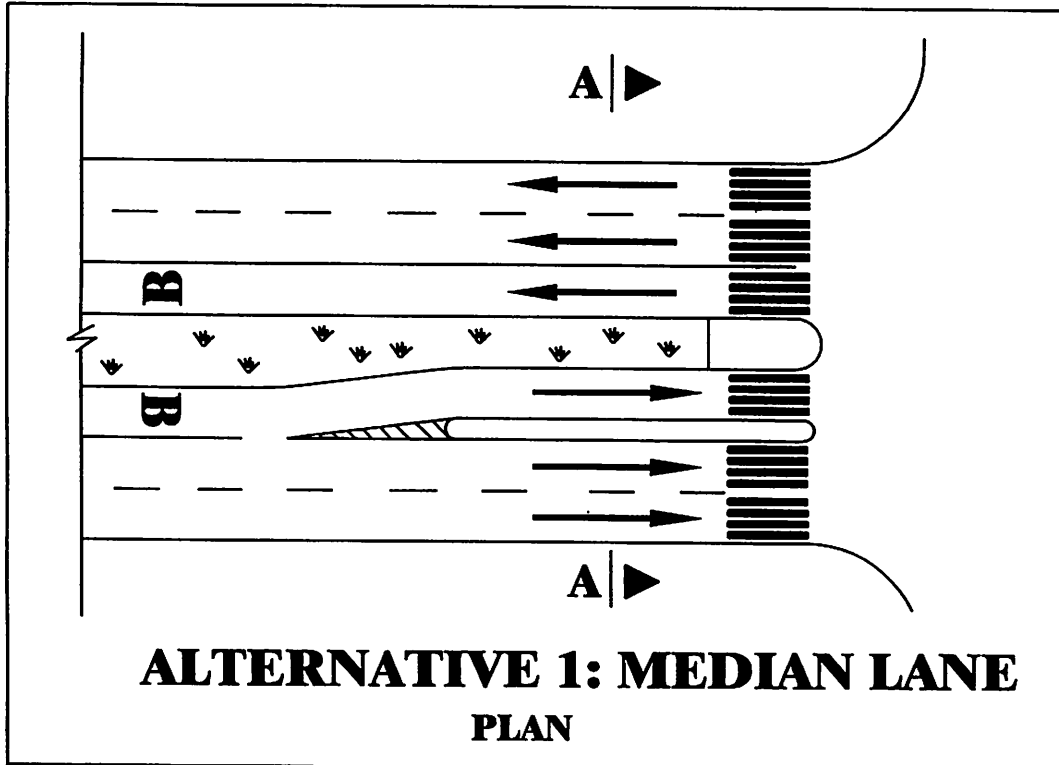
INFORMATION GATHERED

- ★ **Buses are the most efficient vehicles in terms of roadway area occupied per passenger**
- ★ **Passenger attraction lies on providing faster and more affordable rides than on private automobile**
- ★ **Highest operational speeds are achieved with exclusive rights-of-way (v.g. bus lanes or busways)**
- ★ **Priority treatment at intersections reduces travel times and offers better schedule adherence for both buses in exclusive lanes and buses in mixed traffic**
- ★ **Physical separation provides distinct image, favoring enforcement and giving a character of permanence**
- ★ **Some successful cases: Ottawa, Curitiba, Oslo.**

PRIORITY BUS NETWORK



ALTERNATIVE BUS LANE CONFIGURATIONS



FEEDBACK REQUESTED

- ★ **For an exclusive lane to be politically acceptable, what is the minimum vehicular volume? (e.g. one vehicle per minute? Per 2 minutes? Per 30 seconds?)**
- ★ **What other vehicle groups besides buses might be allowed to use the lane? (Publicos, trucks, etc.)**
- ★ **What could be done to minimize opposition to “Take-a-line” measure?**
- ★ **What can be done to make bus lane restrictions more enforceable?**
- ★ **What are the main concerns to retail business along corridors?**
- ★ **What kind of self-enforcing measures are acceptable? (bumpers, reversible lanes, barriers, etc.)**

FUTURE WORK

- ★ **Develop alternative designs for transit priority throughout the Carolina network, considering new collected data**
- ★ **Assemble traffic counts, transit counts and measurements**
- ★ **Model promising alternatives to estimate traffic and transit impacts**

PRIMARY SOURCES

- ★ **ACT: Highway and Transportation Authority**
- ★ **DTOP: Puerto Rico Department of Transportation and Public Works**
- ★ **Multisystems, Steer Davies Gleave**
- ★ **Tren Urbano Office**
- ★ **You!**

