

# **BELO HORIZONTE, BRAZIL**

**BRIEF: AVENIDA CRISTIANO  
MACHADO BUSWAY**

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# **BELO HORIZONTE, BRAZIL**

## **BRIEF: Avenida Cristiano Machado Busway**

### **CITY CONTEXT**

Belo Horizonte is the capital of the state of Minas Gerais in Southern Brazil. The city is located 440 kilometers [275 miles] northwest of Rio de Janeiro. It is the third largest city in Brazil, with a population of 2.2 million.

The city has a rail transit system. Bus lanes and a median busway were installed on three roadways during the 1980s. There are 12 kilometers [24 miles] of curb bus lanes on Avenida Amazonas (1981) and 3 kilometers [1.9 miles] along Avenida Afonso Pena (1982). The 9.0-kilometer [5.6-mile] median busway along Avenida Cristiano Machado was opened in 1983.

### **BELO HORIZONTE, AVENIDA CRISTIANO MACHADO BUSWAY**

The Avenida Cristiano Machado, a purpose-built median busway, links the city center with low-income suburbs. At the city center end of the busway, buses have exclusive use of the lower level of a double-deck tunnel through a hill that links the busway with the city center.

The busway has off-line bus stop bays to permit overtaking (see [Figure 1](#)). It is separated from general traffic lanes by landscaped islands of varying width, but there are no fences to channel pedestrians. Various companies, under a coordinated municipal policy, operate bus services, and buses are color-coded according to route type (express, semi-express, and local) and city areas served; this contributes to their distinctive image.

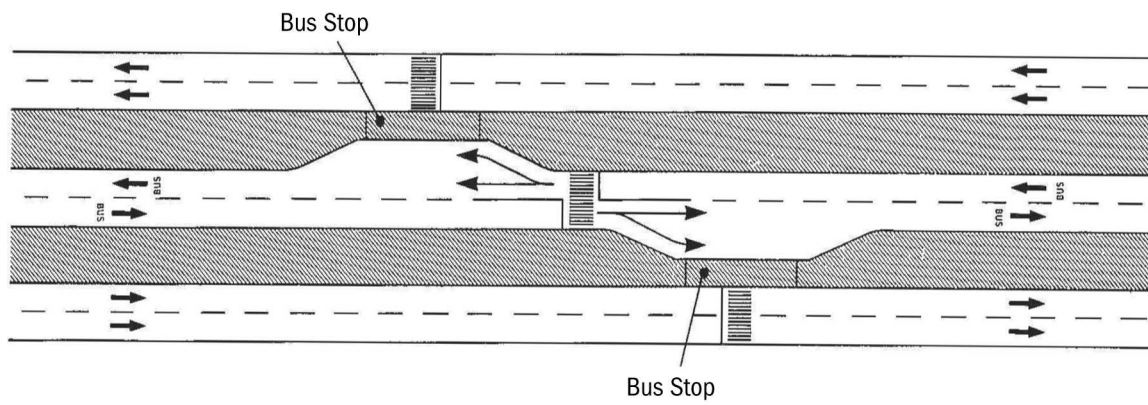
Stops along the busway ([Figure 2](#)) are located about 610 meters [2,000 feet] apart and junctions are every 920 meters [3,020 feet]. Bus flows of over 200 buses per hour were reported in the morning and evening rush hours. Seated passenger flows approximate 8,000 people per hour. Reported passenger flows were 15,800 people per hour in the AM peak and 14,500 people per hour in the PM peak. Some 40 to 50 percent of the peak hour buses had “crush loads.”

## **BIBLIOGRAPHY**

1. Gardener, G., P. Cornwell, and J. Cracknell. "The Performance of Busway Transit in Development Cities." Transport and Road Research Laboratory, Research Report 329, 1991.



**Figure 1: Off-Line Bays, Belo Horizonte**



**Figure 2: Typical Bus Stop Layout, Avenida Cristiano Machado, Belo Horizonte, Brazil**