CHAPTER **1**

INTRODUCTION

BRT has become increasingly popular in cities throughout the world. Reasons for this popularity include BRT's flexibility and ability to be built quickly, incrementally, and economically. In the United States, its development has been spurred by the FTA's BRT initiative.

From Belo Horizonte to Brisbane, Bogotá to Boston, Cleveland to Curitiba, Hartford to Honolulu, and Pittsburgh to Porto Alegre, cities have implemented or are developing BRT systems. The systems are varied, and the reasons for their development are diverse. Collectively, they provide a wealth of information on BRT planning/implementation, design, and operations.

1.A PURPOSE AND SCOPE

This volume of *TCRP Report 90: Bus Rapid Transit* draws on the broad range of experience that has become available and that may help communities in planning new BRT systems or in upgrading existing systems. It is the first of two volumes published as *TCRP Report 90: Bus Rapid Transit* and one of three documents covering TCRP Project A-23, "Implementation Guidelines for Bus Rapid Transit Systems."

The first document, "BRT—Why More Communities Are Choosing Bus Rapid Transit," is an informational brochure that was published in 2001. The third document is the second volume of *TCRP Report 90: Bus Rapid Transit*, which covers implementation guidelines for BRT.

In addition, the project team compiled a video library, which is accessible on-line at http:\\brt.ce.Washington.edu\Filehouse\GetUser.asp. (The access code is ID = TCRP with Password = A-23.) It contains numerous videos, video clips, and still photos of BRT systems and features. These materials illustrate BRT systems; how BRT can be planned and implemented; and how well BRT works in terms of usage, speed, benefits, and costs. These materials, which are being continually updated, provide important resource information on BRT.

The overall research objectives of TCRP Project A-23 were (1) to identify the potential range of BRT applications and (2) to develop descriptive information and technical guidance tailored to meet the needs of various stakeholders interested in BRT as a means of improving mobility.

1.B CASE STUDY CITIES

The case studies analyze BRT systems and services in 26 cities located in North America, Australia, Europe, and South America. They cover a geographically diverse group of communities and a broad range of applications. They provide important information and insights that may be applicable elsewhere.

The case study cities are shown in the list below. These cities were selected in terms of the services provided, information available, geographic diversity, lessons learned, and relevance for North American cities. They include 14 cities in the United States and Canada, 3 in Australia, 3 in Europe, and 6 in South America. Most systems are generally in revenue service, although a few are under construction or in advanced planning. Comprehensive case studies were done for 12 cities, and shorter briefs were prepared for the remainder of the cities.

List of Case Studies

North America	Australia
• Boston, MA	• Adelaide
• Charlotte, NC*	• Brisbane*
• Cleveland, OH	• Sydney*
• Eugene, OR (Lane Transit District)*	Europe
• Hartford, CT	• Leeds, United Kingdom*
• Honolulu, HI*	• Rouen, France*
• Houston, TX*	• Runcorn, United Kingdom*
• Los Angeles, CA	South America
• Miami, FL	• Belo Horizonte, Brazil*
• New York, NY	• Bogotá, Colombia*
• Ottawa, ON	• Curitiba, Brazil
• Pittsburgh, PA	• Porto Alegre, Brazil*
• Seattle, WA*	• Quito, Ecuador
• Vancouver, BC	• Sao Paulo, Brazil*

**denotes brief*

For each city, information was assembled and analyzed on design features, operating practices, institutional arrangements, costs, benefits, and relevance. Twelve case studies were developed in depth, whereas another 14 were developed as shorter "briefs" that reported salient findings. Information was assembled on the following topics:

- **Context**—population, area, central business district (CBD) employment, physical features, and transit use;

- **Planning and implementation background**—how and why the system was implemented, including reasons for implementation (or nonimplementation), and community attitudes;
- **System description**—physical elements (turning way, stations, vehicles, and ITS), operations (service patterns, fare collection practices), and performance (speeds, ridership, benefits, and costs); and
- **General assessment**—the system's strengths and weaknesses, factors contributing to its success, lessons learned, and applications elsewhere.

Each case study is generally organized into these four major categories.

1.C ORGANIZATION OF THE CASE STUDY REPORT

The case study report was organized to present a general synthesis of the case studies, as well as more detailed information on each individual BRT system. The chapters of the report are organized as follows:

- Chapter 1 provides a general introduction to TCRP Project A-23 and to the case study report.
- Chapter 2 provides a synthesis of findings including a basic definition of BRT and the concepts behind it and a comparison of the systems in terms of features, performance, costs, and benefits.
- Chapter 3 sets forth the various lessons learned and their implications.
- Appendix A includes summary tables that compare all the BRT systems examined in the case studies.
- Appendix B (available on *CRP-CD-31*, which accompanies this volume) includes the individual case studies. The systems are grouped by continent (North America, Europe, South America, and Australia) and are then arranged alphabetically within each group.

These case study materials will be useful to communities that are considering BRT as a potential solution to mobility issues, communities that are planning to develop BRT systems, and communities that are examining strategies for upgrading their existing bus services.