

Automated People Movers and Automated Transit Systems 2016



Innovation in a Rapidly Urbanizing World



Proceedings of the 15th
International Conference on
Automated People Movers and
Automated Transit Systems

Toronto, Ontario, Canada
April 17–20, 2016

ASCE

Edited by
William J. Sproule, Ph.D., P.E.



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SPONSORED BY
The Transportation & Development Institute (T&DI)
of the American Society of Civil Engineers

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Published by the American Society of Civil Engineers

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Published by American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, Virginia, 20191-4382
www.asce.org/publications | ascelibrary.org

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Errata: Errata, if any, can be found at <http://dx.doi.org/10.1061/9780784479797>

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ISBN 978-0-7844-7979-7 (PDF)
Manufactured in the United States of America.

Preface

The 15th **International Conference on Automated People Movers and Automated Transit Systems** was held at the historic Fairmont Royal York Hotel in downtown Toronto, Ontario, Canada and the theme of the conference was ***Innovation in a Rapidly Urbanizing World***. Today almost half of the world's population lives in cities and in less than forty years it will be over two-thirds will live in urbanized areas and world air travel is also expected to experience significant growth in the future. The coming decades offer exciting opportunities and challenges for Automated People Movers and Automated Transit Systems as we work to improve the quality of life around the globe.

The Conference Proceedings include over 25 papers that examine the current state of APMs and ATS, and explored what the future might hold. The papers covered a wide range of topics including history, Personal Rapid Transit (PRT), applications, airport projects and other major activity centers, system improvements, facility planning and design, automated train control, and policy. All papers included in the Proceedings have been peer reviewed and accepted for publication. In addition to these papers almost 50 presentations were made at the Conference without a paper that are not included in the Proceedings. Abstracts and presentation slides for all presentations were reviewed by a technical committee prior to the Conference. An exhibit area was also part of the Conference to provide companies with opportunities to share products and services and meet attendees.

The Toronto area provided an exciting setting for the Conference. Toronto is the largest city in Canada and the Toronto Transit Commission (TTC) operates the third largest public transit system in North America with a wide range of modes including buses, streetcars, LRT, the Toronto Subway, and the Scarborough RT. The conference hotel is located across the street from Union Station, Toronto's main intercity train station for Via Rail and the GO Transit commuter rail network. An automated people mover system, the Terminal Link Train, opened at the Toronto Pearson International Airport in 2006, and last year the Union Pearson Express (UP Express) train began operations to provide a direct rail connection between Union Station and Pearson International Airport, Canada's largest airport. Technical tours of the UP Express, Terminal Link Train, and a high speed express power walkway at the airport provided attendees a behind the scenes look at these systems.

This conference is the fifteenth of a series of successful Automated People Mover conferences that began in 1985 in Miami, Florida. Since that time subsequent conferences have brought together planners, inventors, designers, suppliers, builders, owners and operators of automated transit of all forms to share their experiences, reveal innovations, and discuss what they have learned. Past conferences have been

held around the globe and have built an international collegial community and the Proceedings have become invaluable reference sources. In 2011, automated transit systems were added to the automated people mover focus in recognition of exciting applications on line haul metro systems, and the Toronto conference continued that addition.

1985	Miami, Florida	2001	San Francisco
1989	Miami, Florida	2003	Singapore
1991	Yokohama, Japan	2005	Orlando, Florida
1993	Irving, Texas	2007	Vienna, Austria
1996	Paris, France	2009	Atlanta, Georgia
1997	Las Vegas, Nevada	2011	Paris, France
1999	Copenhagen, Denmark	2013	Phoenix, Arizona
		2016	Toronto, Ontario, Canada

The organizing committee acknowledges the significant efforts of the many authors, presenters, moderators, and reviewers who through their efforts have created these Proceedings and contributed to the success of the conference.

Bill Sproule

Acknowledgments

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Tampa Airport APM Project—Fast Track Approach

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Abstract

This paper will inform readers of the processes and steps undertaken during the planning and procurement phases of the automated people mover (APM) project now underway at Tampa International Airport (TPA). The paper will review the need and objectives for the APM system and will touch on how it evolved as an essential component of the Hillsborough County Aviation Authority's (HCAA) Master Plan. We will discuss the early stages of the APM planning/study process and emphasize how quickly the program transitioned from the planning stage to implementation. We will also discuss the Airport's two phase procurement approach in which HCAA first selected the facility Design Builder who in turn prepared the request for proposal (RFP) documents for the APM operating system and is now overseeing the work of the APM system contractor. The bid evaluation process and the fact that the bids were very competitively priced will also be discussed. We will conclude by providing an overview of the APM system and touch on the unique characteristics of the system, such as the multi-grade section of the alignment that passes over the airport roadways while staying below the federal aviation administration (FAA) approach and departure surfaces for one of TPA's runways.