

## Evolving Infrastructure - Light and Transparent

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In 2004 Michael Stein P.E. founded the branch office of schlaich bergemann partner in New York City and leads the U.S. operations as Managing Partner. He is a licensed professional engineer in several states. In his career with schlaich bergemann and partner, he has led projects around the world in different fields of sophisticated and creative structural engineering such as lightweight cable roofs, transparent glass facades, moveable structures and innovative bridges.

### 1 Abstract

In very simple terms cities consist of infrastructure, operations, and people. All over the world more and more people are migrating to cities to find work and improve their living conditions. Consequently, for more and more people the built environment in our cities becomes their natural environment. The quality of the natural environment has a strong impact on the well-being of the people living in it, thus, we can improve the quality of life for an ever-growing number of people by improving the quality of buildings and structures. For years under public budget pressure, infrastructure has been designed focusing mainly on functional aspects, with occasionally abysmal results in terms of user friendliness. More recently this trend has reversed, and this paper shows some examples of large and small infrastructure projects in New York City where special emphasis has been put on creating a pleasant experience for commuters and other travelers. Engineers play an important role in this trend, as with their knowledge and creativity they are instrumental in supporting the municipality's efforts to find affordable solutions for their projects.

**Keywords:** Infrastructure, Transparency, Glass, Creativity

### 2 Introduction

New York City, with its millions of commuters travelling to the city every day, depends very much on functioning infrastructure. Thousands of visitors from outside the region fly into one of New York City's three major airports or arrive at one of the two major train stations. Even though travel has

long lost its exotic flair, people still enjoy arriving at facilities which are welcoming and generous public places. Architects and engineers have been aware of this for a long time and there are wonderful historic examples of train stations, airport terminals and other infrastructure facilities around the world, built in a quality that underscores their

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